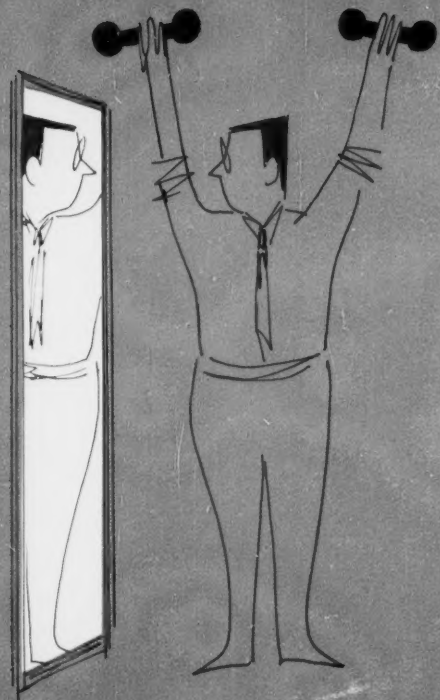


THE NATION'S SCHOOLS



SEPTEMBER

Patterns of resistance to desegregation

Misuse of statistics

Need for some common curricular experiences

The case for movable casework

Better ways of teaching spelling

Who's winning the TV battle at your house?

Superintendent: boss or leader?

Air-conditioning school buildings

Rights, duties, obligations of school architect

THE MAGAZINE OF BETTER SCHOOL ADMINISTRATION

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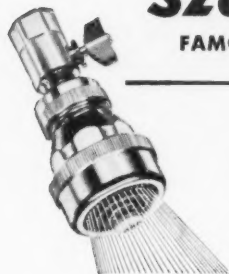
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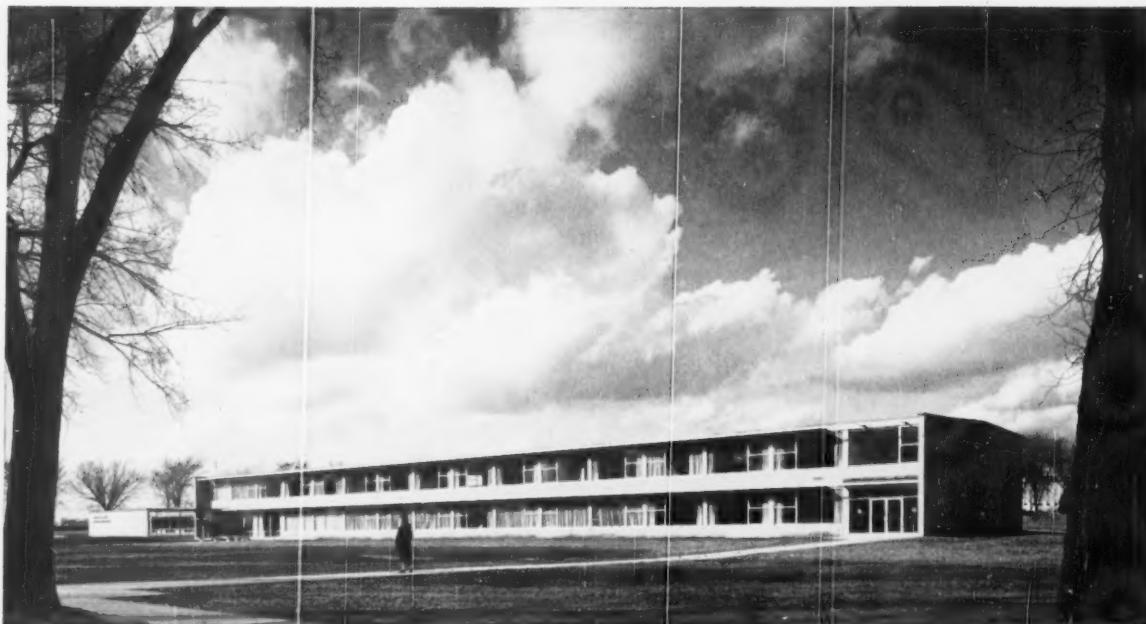
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THE NATION'S SCHOOLS

THE MAGAZINE OF BETTER SCHOOL ADMINISTRATION

SEPTEMBER 1956

ARTICLES

Patterns of Resistance to School Integration.....	43
GLEN ROBINSON	
Better Ways of Teaching Spelling.....	48
An Interview With RUBY M. SCHUYLER	
Our Schools Need Some Curricular Experiences in Common.....	51
FINIS E. ENGLEMAN	
We Did Better Teaching Children Than Informing the Board.....	55
CLARENCE S. TAYLOR	
Older Teachers Aren't Necessarily Grumpy.....	56
HAROLD VAN WINKLE	
Violation of Simple Logic Causes Misuse of Statistics.....	58
FRANCIS G. CORNELL	
Legal Rights, Duties and Obligations of the School Architect.....	74
LEE O. GARBER	
Teachers Talk Too Much.....	77
C. J. DINTELMAN	
Who's Winning the Television Battle at Your House?.....	78
D. K. WOODMAN	
Most Administrators Say: "Nepotism Is No Problem".....	80
OPINION POLL	
Boss or Leader?.....	81
JOHN P. MILLIGAN	
Chalk Dust.....	85
FREDERICK J. MOFFITT	

SCHOOLHOUSE PLANNING

Elementary School Meets Educational Specifications.....	62
J. E. BROWN	
How Lancaster's Nine Specifics Were Structurally Realized.....	65
HAROLD BOLES and JOSEPH BAKER	
In Tucson, Ariz., Every School Building Is Air Cooled.....	67
ROBERT D. MORROW	
Three Votes for Movable Casework.....	70
CHARLES D. GIBSON	

BUSINESS ADMINISTRATION

No Excuse for Conflict Between Maintenance and Instruction....	86
GORDON E. HARAM	
Training Custodians for School Care in an Industrial Arts Course..	87
FLOYD G. HOEK	
Good Supervision Means Good Maintenance.....	88
A. D. BRAINARD	

THE SCHOOL LUNCH

Cafeterias Built to a Standard Design.....	94
MARGUERITE MOORE and EMMA LEE HUTCHINSON	

AUDIO-VISUAL

Planning A-V Facilities for Future Buildings and Curriculums.....	104
WALTER A. WITTICH	

REGULAR FEATURES

Among the Authors.....	4
Administrator's Clinic.....	6
Reader Opinion.....	8
Roving Reporter.....	12
Looking Forward.....	41
Wire From Washington.....	112
News in Review.....	118
About People.....	134
Coming Events.....	op 161
The Bookshelf.....	162
What's New for Schools.....	175
Index of Advertisers.....	op 224

AMONG THE AUTHORS



Ruby Schuyler

The old-fashioned spelling bee may still have a place today, but it is a very limited place. On page 48, RUBY M. SCHUYLER explains the what and why of current spelling fashions. Miss Schuyler was a reading counselor in schools at Glencoe, Ill., before her appointment as director of curriculum there in 1942. She has also taught in Iowa, Indiana and Wisconsin and served as head of the lower school of Milwaukee Downer Seminary, Milwaukee. For several years, Miss Schuyler was a member of the executive board of the Association for Childhood Education International, and has been consultant and instructor in reading and child development for summer sessions at the University of Wisconsin and the University of North Carolina.

Tales of conflict between school board and administration do not always have a happy ending, but CLARENCE S. TAYLOR's story on page 55 has both a happy ending and a word to the wise. Mr. Taylor has served as assistant administrator of public schools in Warwick, R.I., for the last four years. Before going to Warwick, he held positions as guidance counselor, coach and assistant principal in Providence, R.I. He is past state chairman of the Association for Supervision and Curriculum Development.



Charles D. Gibson

A strong case for movable casework in classrooms is presented on page 70 by CHARLES D. GIBSON, supervising field representative for the school planning section of the California State Department of Education. A native Pennsylvanian, Mr. Gibson emigrated to California in time to graduate from high school there, and he remained to become teacher, principal and district superintendent in California schools. He is a past president of the National Council on Schoolhouse Construction.

Good maintenance is essential to the educational enterprise; Authors A. D. BRAINARD, GORDON E. HARAM, and FLOYD S. HOEK discuss different requirements for its effective and smooth operation. Dr. Brainard, whose article on maintenance supervision appears on page 88, is deputy superintendent in charge of business and finance for schools in Dearborn, Mich. He has also served as assistant superintendent in charge of business at Muskegon, Mich., and superintendent at Carleton and Blue Hill, Neb. He is a past president of the Michigan Association of School Business Officials. . . . Mr. Haram, a native Canadian, has been with the school system at Ottawa, Ont., since 1934,

rising from clerk of supplies to secretary-treasurer of the school board there. His article on maintenance finance is found on page 86. He is a past president of the Ontario Association of School Business Officials. . . . Mr. Hoek proposes standards and a training program for custodial personnel (p. 87). For the last 15 years, Mr. Hoek has been secretary and business manager for the schools at Asbury Park, N.J., and secretary of the board of school estimate there. Previously, he held other school administrative positions in Montana and New Jersey.

Early settlers in Arizona stayed cool behind thick adobe walls, but modern school construction made this solution impossible for pupils in Tucson. On page 67, ROBERT D. MORROW, Tucson superintendent, describes the schools' new air conditioning installations. Mr. Morrow went to Arizona in 1932 as superintendent of the Arizona School for the Deaf and Blind, becoming superintendent at Tucson in 1941. In 1955 he was chairman of a special education subcommittee for the White House Conference on Education. He is a past president of the Arizona Association of School Administrators and represented Arizona on the advisory council of the American Association of School Administrators for several years.

Old and grumpy? It's not necessarily so, says HAROLD VAN WINKLE (p. 56).

Dr. Van Winkle is director of publications and news service for Bowling Green State University, Bowling Green, Ohio, and received his doctorate in education in June from Indiana University. The research project for his dissertation was sponsored by the Midwest Administration Center of the University of Chicago and included an intensive study of school-community programs in 19 Ohio counties. Dr. Van Winkle's dual interest in education and in public information services was off to an early start when he earned his bachelor's degree in education at Southeast Missouri State College, while working as a reporter in Cape Girardeau, Mo. Since that time, he has taught and held public relations positions in schools and colleges in Indiana and the Philippine Islands.



Harold Van Winkle

A laryngitis epidemic among teachers could revolutionize classroom procedure, and CHARLES J. DINTELMAN believes this would be all to the good. Mr. Dintelman, whose own laryngitic bout is described on page 77, has been superintendent of the community unit district in Charleston, Ill., since 1954. He has been a superintendent in Winnebago County and at Fulton and teacher and assistant high school principal at Highland, all in Illinois.



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Education and manpower . . . Professional qualifications of
business officials . . . Budget directives . . . Merit rating

By CALVIN GRIEDER, professor of school administration, University of Colorado

The budget is the green light.

Budgets have been adopted recently in many thousands of school districts, and in most others will be considered at an early date. Budget adoption involves much more than school board members and administrators are generally aware of.

A properly developed budget is based on both the educational program and the resources deemed to be available to finance the program. Assuming that the document has been carefully drafted, in accordance with sound theory and good practice, its adoption in final form by the governing board, on the recommendation of the superintendent, should be virtually a formality.

Once the budget is approved, it becomes immediately an administrative tool ready for use by the school administrator. In this light, the budget gives the superintendent a green signal to go ahead and do what is provided for. This is the very point which is frequently overlooked.

The administrator is charged then with two tasks. First, he is directed to effect what the budget provides for, and, second, he is responsible for managing affairs so as not to exceed the financial limits imposed.

There should be no need for a superintendent to re-refer to the board matters which are provided for in the budget, except when the board must act on bids which may be called for on some items. Detailed, monthly financial reports on receipts and expenditures, showing budgeted appropriations and balances remaining, should, of course, be furnished by the administrator to the board.

The board is entitled and is indeed required to be fully informed on the financial status of the school district. It cannot escape the ultimate responsibility for fiscal management. However, the superintendent is the chief execu-

tive officer of the board, and as such he is responsible for administering the budget. As long as he operates within its framework and makes full and regular reports, he should incur no adverse criticism for carrying out the directives which the budget embodies.

Business officials improving professional qualifications.

School business officials across the nation will soon be meeting in annual convention. There is no group, with the possible exception of elementary school principals, which seems to be making more rapid strides toward professionalization. Having taken part in some of these meetings, I strongly recommend that business officials be sent to their professional meetings at school district expense every year, or as often as it can possibly be done. Just one good idea gleaned there by your business manager will repay the cost several times, if you want to look at it in a purely dollars and cents way.

While I'm on the subject, it occurs to me that officials in many school systems find themselves wondering if they should have a business manager—an assistant superintendent in charge of business or the like. At what point is such an appointment warranted? How big does a school system have to be?

There is no scientific answer to these questions. On the basis of wide observation and consultation, I would suggest as a rough rule of thumb that when a school system exceeds a total of 100 employees it is time to appoint a person for business management.

Payroll administration, the purchasing, storage and distribution of supplies and equipment, the drafting of contracts, the insurance program, financial accounting, and the many other activities that business management embraces, become increasingly complex

as a system grows. Beyond the point of about 100 employees the work demands more background, knowledge and skill than a secretary or clerk can be expected to possess. Furthermore, it is a gross overload for the superintendent to carry if he is to discharge his duties as educational leader.

The Association of School Business Officials deserves full cooperation in its current efforts to promote good programs of professional training for school business managers. Along with this emphasis should come improvement in the procurement and appointment of persons in this field. There is a dearth of training programs, and it is time that universities do something about it. Schools of business and schools of education might well work together in developing this needed service. Following through, school boards and superintendents may have to raise their sights so that professionally prepared men will have job opportunities.

Education is first essential of manpower development.

Some of the best professional reading of the year will be found in the 128 page report issued in July by the Educational Policies Commission, "Manpower and Education."* The tone of the book is deceptively disarming and unexcited. But the facts and figures it presents are far from unexciting.

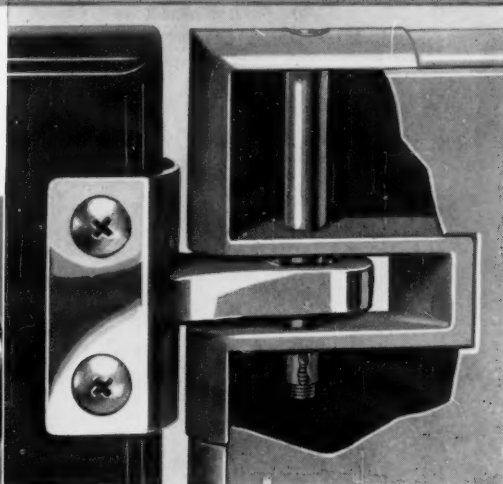
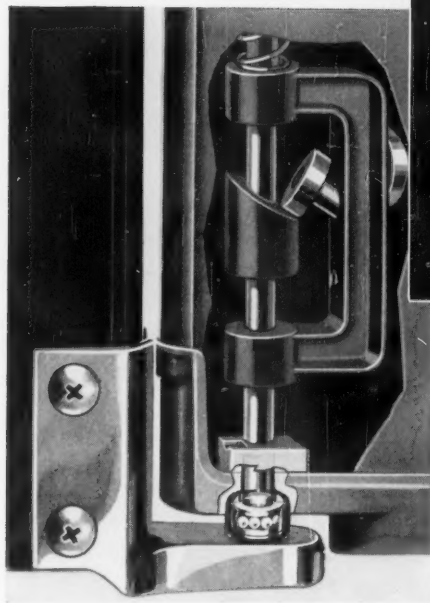
In nine short, exceedingly well written chapters, the commission treats America's manpower problem and education's place in dealing with it. Perhaps the point of view can be best shown by a quotation or two from page 59:

"It should not be hastily concluded, however, that education alone is involved in developing an adequate manpower policy for the nation or that education alone can solve all aspects of the manpower problem. What is done in creating and meeting needs for men and women for the armed services, what wage scales are adopted in the various vocations, what prestige is attached to different vocations, what commitments are made for technical assistance as a part of foreign policy, and a host of other such matters operate incessantly on the manpower situation. Moreover, even within an educational system or institution there

(Continued on Page 8)

* In paper covers, \$1.25 per copy from National Education Association, 1201 Sixteenth St. N.W., Washington 6, D.C. Cloth-bound, \$1.75.

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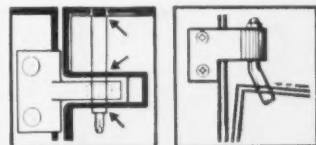
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engineering . . . the "clevis" principle noted at right*

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Administrator's Clinic, Cont.

can be no one manpower program, no single approach to the manpower problem, no allocation of responsibility to a single element of the educational system.

"Because education is the first essential of manpower development in a democratic society, educators must be students of the manpower problem, informed of its scope and nature, and effective in coping with it. Education has its limitations, but, even more strikingly, it has its obligations and

opportunities in dealing with the manpower situation."

I feel perfectly safe in urging every administrator to read and think about this little book and in suggesting that it be made readily available to his staff. It is a gem—one of the best of the fine reports published by the commission in the last 20 years.

N.E.A. shortsighted on merit rating. It is disappointing that the N.E.A. convention turned a cold shoulder to merit evaluation of teaching. Unless teachers get in on the ground floor,

I fear that policies and plans for merit evaluation will be developed which many teachers may be unhappy about. The best cooperative endeavors of teachers, administrators and board members will be needed to work out satisfactory procedures.

There is no doubt in my mind that merit evaluation is in the cards. I should think that in their own self-interest, if for no other reason, teachers would "want in" on this deal.

READER OPINION

ABC's for Administrators

Adoption without adaptation is asinine. Beware of bumptious blundering.

Cater not; crucify not.

Delegate; delegate; delegate.

Earnestness earns; envy erodes.

Flit not; fossilize not.

"Grow into" instead of "go into" new projects.

Humility helps; high-hatting hinders. Intense interest infects other individuals.

Join judiciously; judge generously. Knack is no substitute for knowledge. Listen; learn; lead (in that order).

Mastery of job does not mean mastery of others.

Newness does not require needling.

Outthink rather than outwit.

Ponder ever; pontificate never.

Question answers as well as answer questions.

Read; reread; remember (only the best).

Secretaries save many from stupidity.

Treasure truthful testimonials.

Unity does not mean uniformity.

Variety flexes; vogue vexes.

Wise wives make worth-while administrators.

EXploit not; "eXpert" not.

Youth is measured not in years but in yearning.

Zeal and zest will help you to the zenith.

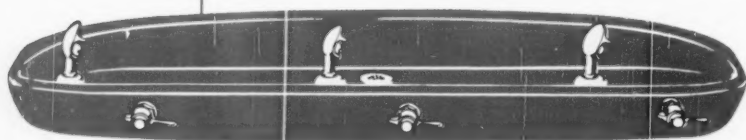
—CHARLES E. BRAKE, superintendent, Wayne County Schools, Detroit.

Medicine Has No Priority on Title of "Doctor"

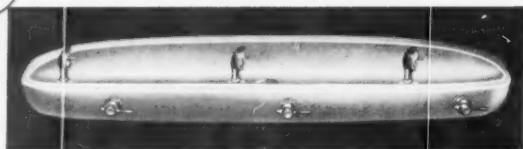
There is a tendency to assume, in the United States, that a person who has the title of "doctor" is a physician, a surgeon, or a dentist. As a matter of fact, it is quite likely that there are more doctors who do not belong in these three categories than do belong there. (Cont. on Page 10)

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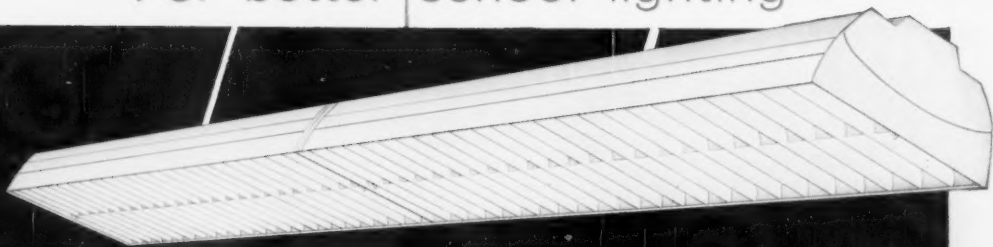
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Reader Opinion, Cont.

The word "doctor" comes to us from the Latin language, without any change in its spelling. Its basic meaning is approximately the same as that of the word "teacher." Literally, it means a learned man who is qualified to instruct others about some field of thought, knowledge or skill in which he has become a recognized master. There is no justification for limiting its use to the fields of medicine, surgery and dentistry.

Of course it is true that in our Western civilization all members of the medical and dental professions must hold some recognized degree such as doctor of medicine, doctor of dental surgery, or an acknowledged equivalent of one of these. But a doctor of philosophy or a doctor of education is just as much a "doctor" as is the medical man.

It seems surprising to find that some men who hold Ph.D. or Ed.D. degrees follow the common practice of referring to a physician or a dentist as a "doctor" as if the members of the medical and dental professions had a copyright on this term.

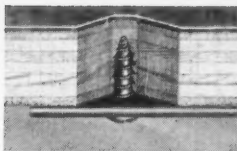
A great educational association which is nationwide in its interests recently issued a printed circular appealing for an increase in its membership. One sentence in its message read as follows: "Alert teachers, like lawyers and doctors, are proud to be members of their professional organizations." The executive director or secretary of this organization and all of its assistant executive secretaries hold doctors' degrees, yet they themselves misuse this term.

Various authors and columnists fall into this mode of expression, also. Not long ago, there appeared a news item telling of a joint meeting of a medical association and a bar association. The story of the meeting appeared under the caption: "Doctors and Lawyers Head New Joint Body Called Time-saver."

At about the same time, another writer was preparing material about a medical bureau which provides a clearinghouse for information as to the hour-by-hour spot where certain physicians and surgeons can be located. This story appeared under a news headline which read: "You Need a Doctor Quickly? Here's How to Get One."

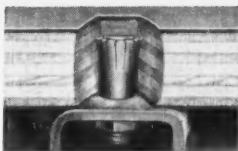
In order to qualify for the doctorate, it is necessary for an individual to go through several stages of advanced

(Continued on Page 128)



OTHER

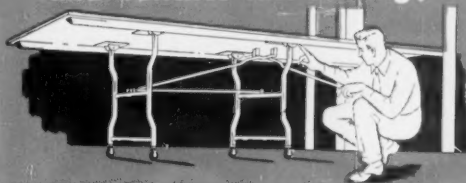
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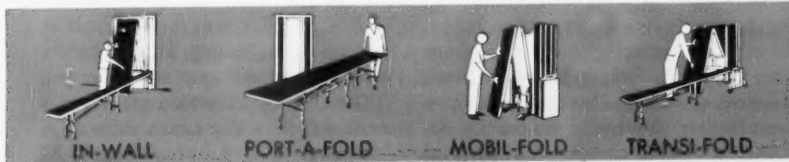


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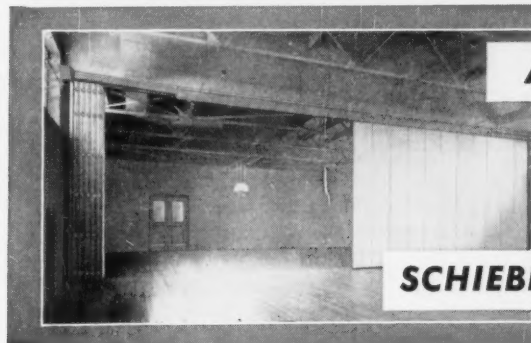
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ROVING REPORTER

Shark's Tooth Starts Sixth Graders on a Fossil Hunt • Horseback

Riding Is Extracurricular Activity • A School Goes to the People

A SHARK'S TOOTH started sixth graders in a school at San Diego, Calif., on a fossil hunt. Teacher Jack Moore had found the tooth in a Mission Valley canyon; one day when his class was discussing what the world was like many years ago, he brought out the fossil and asked if anyone could identify it.

Many were eager to guess; Mr. Moore ended the discussion by putting the tooth on the science table and saying, "Let's all take a close look at this some time during the day, think about it, and maybe we can identify it on Monday."

Several children went to the library to do research over the week end—and came back with a book showing pictures of sharks' teeth.

The next question was: How did the tooth get in the Mission Valley? The children decided to look for other fossils and find out what they would reveal. They planned to identify and label all fossils; any that could not be labeled would be grouped according to shape, size, color or type of structure. Later they went to the Museum of Natural History for help in identifying these specimens.

In a few days fossils covered the science table, and soon they overflowed onto other tables. After discussing the specimens, the boys and girls decided the San Diego area had definitely been under water at one time. This led to the class's studying what the earth looked like in those days, what grew on the land, what types of animals there were, and how the earth changes.

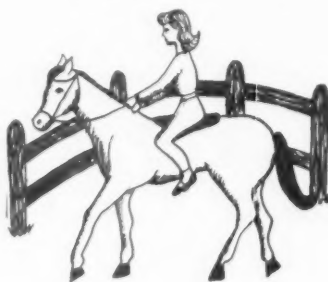
The interest in fossil collecting spread, and soon whole families were taking week-end trips to the desert, going north to the La Brea Tar Pits, exploring the beach, even traveling as far south as San Felipe, Mexico.

The children learned how scientists search for fossils and evidences of primitive man and how careful they are about removing fossils and making accurate records of the location of

each find. They also learned that if they made an unusual find they shouldn't disturb it but should get in touch with scientists at the Museum of Natural History.

MORE THAN A HUNDRED BOYS and girls at Pelham High School, Pelham, N.Y., belong to the Equitation Club. The club is divided according to students' skill and experience into six or eight classes, and the youngsters ride each week during the school year.

Usually they ride in an indoor arena, but in spring and autumn they occa-



sionally use an outdoor ring. Advanced classes go out on the trail through woods and fields. So says Dorothy Spaulding, the club's sponsor. Mrs. Spaulding is an art teacher at Pelham High School.

It sounds like an expensive hobby, but Mrs. Spaulding contends it costs no more than dancing lessons or music lessons or skating. Many students earn the money for riding lessons by delivering papers, sitting with babies, or other after-school and summer jobs. A number of them expect cash for birthday or Christmas, and get it. There is no snobbish "horsey set" in the school; the Equitation Club has members from all economic and social strata in the district.

The club operates as an extracurricular program of the physical education department. In junior high school students win their school letters on scholarship, attendance and participation in school affairs. The riding club is a boon to many students who cannot

win sports points any other way, Mrs. Spaulding says. Youngsters with some slight physical handicap or frailty may excel in horsemanship. In senior high school, active membership in the riding club and making the "honor squad" carry the same weight as varsity sports toward school activity and service awards.

There's an annual horse show to which parents and friends are invited. Seventh graders may ride to music in drills and formations; the senior advanced class may do jumping. Then there are games, such as bean-bag basketball, musical chairs, or a potato race in which more advanced riders take part. And there are trophies, you can be sure.

To keep fees down or even to interest a riding stable in a school group, Mrs. Spaulding says, there must be organization for consistent attendance. Too, the children must get something constructive, interesting and (whether they know it or not) educational out of an Equitation Club. One of the club's great assets is the carry-over value of riding skills into adult life, the club sponsor asserts in an article in the June issue of *New York State Education*.

THE SCHOOLS went to the people at Sterling, Colo., during Public Schools Week—or at any rate one class did.

The class of 29 second graders was conducted for a day in the show window of a local furniture store. As nearly as possible the regular day's program was followed—music, physical education, arithmetic, reading, social studies, art, writing and spelling.

Passers-by were intrigued; the teacher, Flora Lou Anderson, reported: "I was very thrilled to do it," and Supt. Elmer L. Burkhard said that a similar demonstration may be tried next year with another grade.

The children were thrilled too; having their pictures published in the local newspaper made them feel like celebrities.

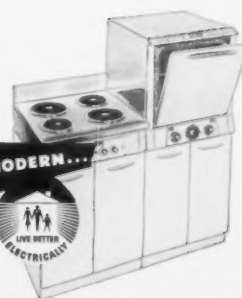


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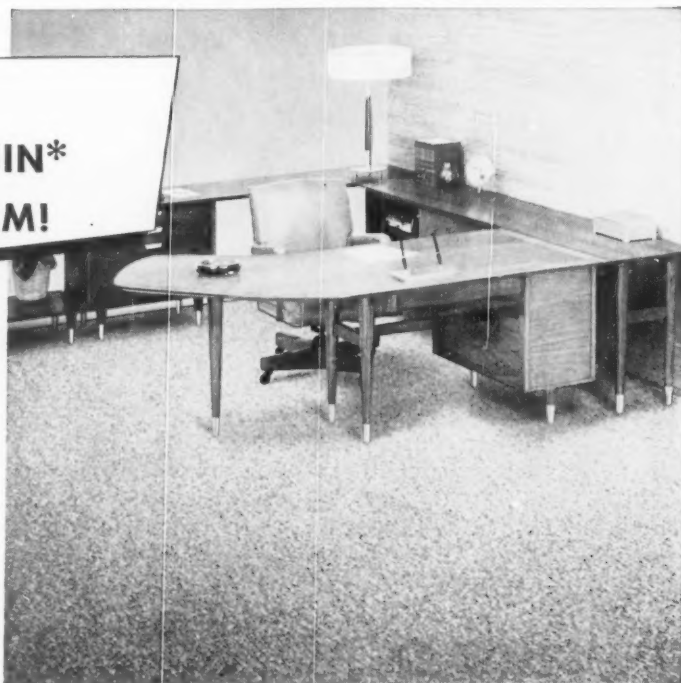
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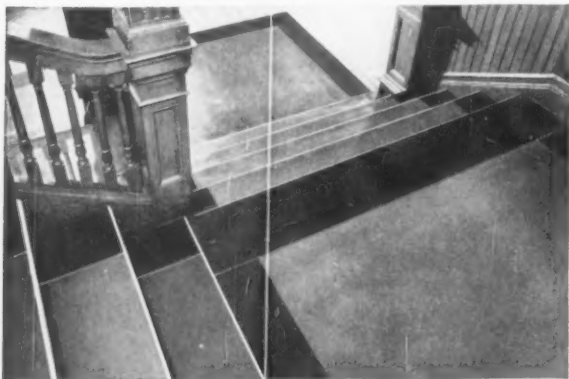
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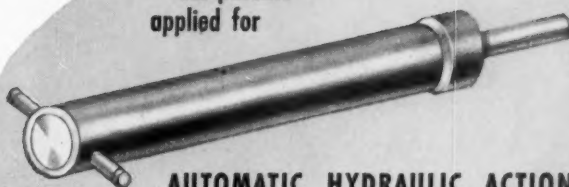
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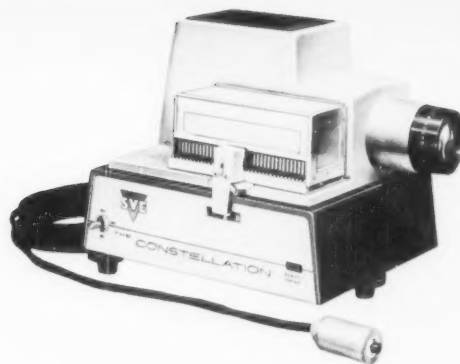
300-watt lamp; convection cooling. Sturdy horizontal slide carrier included. Rewind take-up available as accessory.

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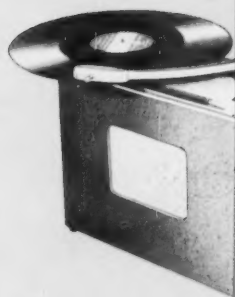


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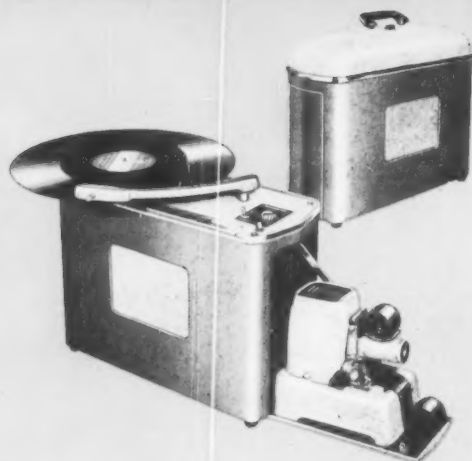


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Special section on visual equipment and accessories.

Ask for these valuable ready-reference guides... they are free!



Illustravox Automatic 300-A

Film advances automatically from inaudible tone signal on phonograph record without attention from operator. For non-automatic records, remote push-button cord (furnished) or manual film advance knob may be used. Speaker: 5" x 7" Alnico-5 P.M. Projector: 300-watt; blower cooled; coated lens.

No. 300-A Illustravox Automatic, 110-120 volts, 60 cycle, AC, complete.....\$219.50

Illustravox Remote Electric 300-RE

For audible-signal sound slidefilms. Hand-held push button controls film advance from any location in the room. Can be operated manually with knob on projector. Speaker: 4" x 7" P.M. Projector: 300-watt; blower cooled; coated lens.

No. 300-RE Illustravox Remote Electric, 110-120 volts, 60 cycle, AC.....\$189.50

Illustravox Sound Slidefilm Equipment

Two-speed turntable (33 $\frac{1}{3}$ and 78 rpm) on all models; crystal phono pickup with permanent needle for regular and long-playing records. Push-pull output; jack for external speaker. Dual speaker grilles, acoustically balanced. Sturdy plywood case with scuff-resistant vinyl covering; unbreakable moulded Royalite cover. Case provides storage for 3 films and 3—12" records.

Illustravox Manual 150-M

Manual operation with remote pull cable or with film advance knob. Speaker: 4" x 7" P.M. Projector: 150-watt; coated lens.

No. 150-M Illustravox Manual, 110-120 volts, 60 cycle, AC...\$169.00

Illustravox Remote Manual 300-RM

Manual operation with pull cable for remote operation or film advance knob on projector. Speaker: 5" x 7" Alnico-5 P.M. Projector: 300-watt; blower cooled; coated lens.

No. 300-RM Illustravox Remote Manual, 110-120 volts, 60 cycle, AC.....\$179.50

Illustravox Accessories

No. AS-69 Remote Speaker, complete with 30-foot cord. Can be used with all Illustravox models. In matching case.....\$48.50

No. EE-1336-A Electric Advance Extension Cord for Models 300-A and 300-RE. 25-ft. long; complete with connectors, each 5.00

SEOSCOPE MICROPROJECTOR

For study of live and inanimate science specimens

Self-contained; permits entire class to view a single specimen at the same time. Projects horizontally on screen or vertically on 8-inch-diameter base area. Easy-to-use polarizing set and 25mm, 16mm and 10mm lenses are standard equipment. Convection cooled, no motor to cause vibration. 100-watt, 20-volt, G16 $\frac{1}{2}$ lamp. 31" high; base—10 $\frac{3}{4}$ " wide; 14" long.

No. US-2 Seoscope complete; 3 objectives—25mm, 16mm, 10mm; polaroid set; plastic cover....\$139.50

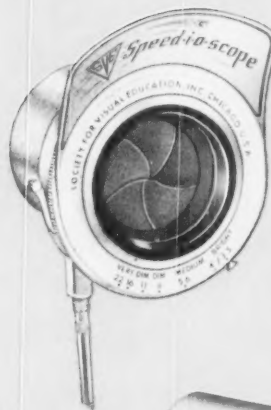


TACH-ADAPTER

Tachistoscopic projection at low cost

Fits any filmstrip or slide projector with front-end lens diameter of 2 $\frac{3}{4}$ " or less. Touch of release clip operates shutter; projects at approximately 1/25 second.

No. TA Tach-Adapter, complete.....\$7.50



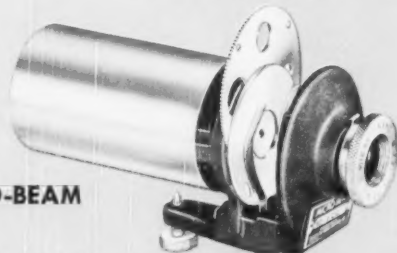
SPEED-I-O-SCOPE

SVE tachistoscope for flash recognition

Permits flash exposures at seven speeds from one second to 1/100 second. Shutter may also be held open as long as desired. Can be attached to any standard filmstrip or slide projector with Series "S" or "O" lens. Specify lens series when ordering.

No. SSA Speed-i-o-scope, complete with case.....\$89.50

No. SSAJ Speed-i-o-scope, Jr. Three shutter speeds—1/100, 1/50 and 1/25 second. Also "bulb." Complete with case..... 59.50

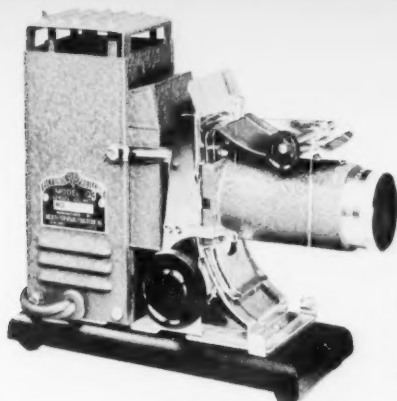


MICRO-BEAM UNIT

Microprojection at low cost

Magnifies 12 times for each foot of projection. Various-sized disc openings permit focus on special sections of image. Fits any standard projector with Series "O" or "S" lens. Specify lens series when ordering.

No. MA Micro-Beam, complete with case (specify lens series).....\$39.50



Q-3 PROJECTOR

for single-frame filmstrips

Complete unit—projector,
case and screen

Projector operates behind 9" x 11" translucent screen (included in kit), permitting "table-top" showings for small groups. Equipped with 150-watt lamp; convection cooled; AC-DC. 2" anastigmat coated lens. Rewind take-up available as accessory.

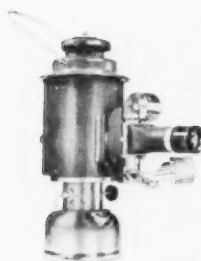
No. Q-3-CA De luxe Q-3 Kit, complete with Q-3 projector, 9" x 11" translucent screen and De luxe carrying case which accommodates projector, screen and up to 10 filmstrip containers.....	\$61.95
No. Q-3-C1 Standard Q-3 Kit: Q-3 projector, 9" x 11" translucent screen and carrying case for projector only. Complete.....	57.95

Unit prices for Q-3 projector and accessories

No. Q-3 Projector with 3" lens.....	\$42.50
(with 2" or 4" lens, \$2.50 additional)	
No. L00-2 or L00-4 2" or 4" lens for Q-3 projector.....	22.50
No. L00-3 3" lens for Q-3 projector.....	20.00
No. RTT Rewind Take-up.....	5.95
No. Q-TS 9" x 11" Translucent Screen.....	7.00
No. Q-3-CAC De luxe case; holds projector, 9" x 11" screen and 10 filmstrips.....	11.95
No. Q-3-C Standard case; holds projector only.....	5.95

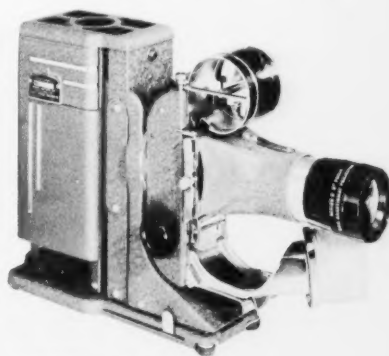
INTERNATIONAL MODEL Gasoline-Kerosene Powered Projector

Single- and double-frame
filmstrips and 2 x 2 slides



For use wherever electricity is inaccessible. Special Coleman lamp burns from 10 to 12 hours on a single filling of gasoline or kerosene. Clear, effective projection; quick changeover from filmstrips to slides. Equipped with 5", f/3.5 coated lens; "slip-in" threading. Horizontal slide carrier and adapter included. Complete with 6 mantles, filter and extra generator.

No. I-50 International, complete with slide changer; without Rewind Take-up..	\$79.50
No. I 50-C International Case.....	19.95
No. RTT Rewind Take-up.....	5.95
No. I-M Special Mantles for SVE International (1 doz.).....	3.00



MODEL AAA-2 Tri-Purpose Projector

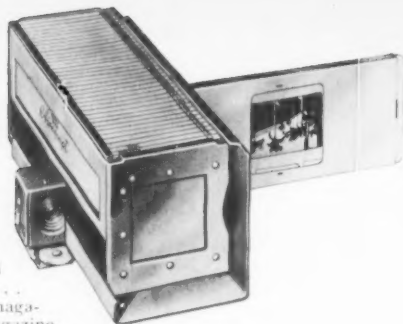
Single- or double-frame
filmstrips and 2 x 2 slides

High-quality 5", f/3.5 lens; 300-watt lamp. Rotating head locks in horizontal or vertical positions. Equipped with horizontal slide changer.

No. AAA-2 Projector, with slide changer.....	\$80.00
No. AAA-2-C Case for AAA-2 projector.....	7.50
No. RTT Rewind Take-up.....	5.95
3", 4", 7" and 10" lenses also available. See back page.	

AIREQUIPT AUTOMATIC SLIDE CHANGER

Show in any sequence desired... automatically. Simple push-pull motion selects and centers slides... returns them to original place in magazine. Slides cannot fall out of magazine. Specify projector model when ordering.



No. P Airequipt Automatic Slide Changer, complete with one permanent storage magazine for 36 slides, and adapter (specify projector model).....	\$14.95
No. PM-12 Extra magazines for 36 slides, each.....	2.25
No. PC-6 Carrying case for Airequipt Changer and 6 magazines.....	6.98
No. PC-12 Carrying case for Airequipt Changer and 11 magazines.....	10.95

SVE SLIDE BINDERS protect your slides

Highest quality covers and heavy Kraft paper frames provide maximum protection and uniform registration.

No. SBD-1 Bulk pack of 100 Double-Frame.....	\$5.95
No. SBB-1 Bulk pack of 100 Bantam (large frame).....	6.95
No. SBD-2 Package of 20 Double-Frame.....	1.45
No. SBB-2 Package of 20 Bantam (large frame).....	1.65
No. SBS-1 Box of 100 Single-Frame Adapters.....	1.25
No. SBA-1 Box of 100 Square-Frame Adapters for Robot and Tenax film.....	1.25

SVE Speed-i-o-slides

Make your own slides for flash recognition training quickly and economically. Specially treated; 2 x 2 Bantam size; standard binders. Easily erased for re-use.

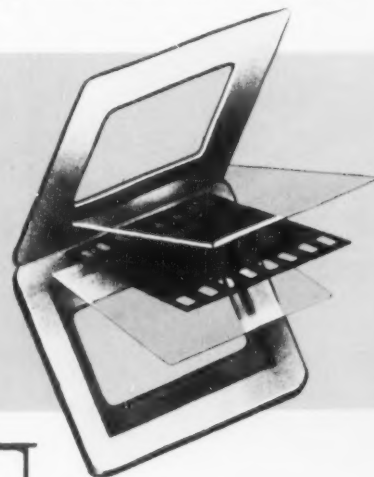
No. SSL Speed-i-o-slides, box of 25.....	\$2.95
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SVE SLIDE CHANGERS

A type for every projector, every need

HORIZONTAL SEMI-AUTOMATIC (illustrated) — For all Skyline and School Master models. No. SCSA..	\$7.50
VERTICAL SEMI-AUTOMATIC — Fits all Instructor, AAA and AAA-2 models. No. SCT.....	\$5.25
HEAVY-DUTY HORIZONTAL — For all Instructor, Skyline and School Master (with adapter) models. No. SCN (specify projector model).....	4.50
HORIZONTAL TRANSVERSE — Fits all Skyline and School Master models. No. SCSH.....	3.95



SVE LENSES

Professional Quality . . . Precision-Ground

SVE SERIES S LENSES

For SCHOOL MASTER, SKYLINE and later INSTRUCTOR models

No. LS3 Series S, 3", f/3.5.....	\$27.50
No. LS4 Series S, 4", f/3.5.....	25.00
No. LS5AB Series S, 5", f/4.0.....	15.00
No. LS5C Series S, 5", f/3.5.....	20.00
No. LS5D Series S, 5", f/2.9.....	25.00
No. LS7X Series S, 7", f/3.5.....	79.50
No. LS7 Series S, 7", f/4.9.....	49.50
No. LS10 Series S, 10", f/5.6.....	79.50

SVE SERIES O LENSES

For INSTRUCTOR, AAA-2, ENTERTAINER, G-2, DD, INTERNATIONAL models

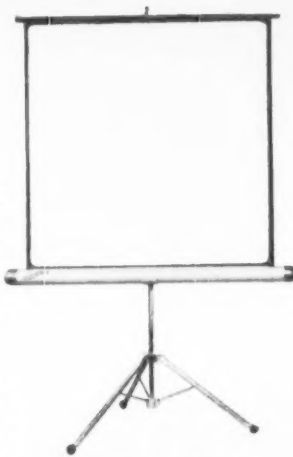
No. L03 Series O, 3", f/3.5.....	\$27.50
No. L04 Series O, 4", f/3.5.....	25.00
No. L05 Series O, 5", f/3.5.....	20.00
No. L07X Series O, 7", f/3.5.....	79.50
No. L07 Series O, 7", f/4.9.....	49.50
No. L010* Series O, 10", f/5.6.....	79.50

*Not recommended for International

SVE SERIES OO LENSES

For Q and Q-3 models

No. L002 Series OO, 2", f/2.8.....	\$22.50
No. L003 Series OO, 3", f/3.0.....	20.00
No. L004 Series OO, 4", f/3.5.....	22.50



Glowwhite De luxe Screens

Choice of 3 fabrics: matte white for wide-angle viewing; beaded for narrow-angle viewing; silver for 3D stereoscopic projection. Lightweight; easy to carry, easy to set up. Available in wall and tripod models. Specify choice of fabric.

No. GL-40 (40" x 40")..	\$27.95
No. GL-50 (50" x 50")..	36.95
No. GL-60 (60" x 60")..	44.95
No. GL-70 (70" x 70")..	54.95

All prices and specifications are subject to change without notice.

SVE

SOCIETY FOR
VISUAL EDUCATION, INC.

(A Business Corporation)
Chicago 14, Illinois

A SUBSIDIARY OF

CPE

FOR ADDITIONAL INFORMATION OR A DEMONSTRATION
OF S. V. E. EQUIPMENT CALL YOUR

S. V. E. DEALER

or write to S. V. E., 1345 Diversey Parkway, Chicago 14, Illinois

Printed in U. S. A.



There's safety in the shine if there's Du Pont Ludox® in the wax

Quick work, Miss Jones—the boss is waiting! Safer work, too, because that gleaming floor wax contains “Ludox” colloidal silica . . . Du Pont’s anti-slip ingredient.

In more and more offices, hospitals, schools and churches, the unique “snubbing” action of “Ludox” is reducing skidding and slipping. This action occurs when the pressure of a footstep forces the hard, transparent “Ludox” particles

into the softer wax . . . absorbing the foot’s forward-moving energy. The result: added traction and safety underfoot.

What’s more, high-grade waxes, properly formulated with “Ludox,” retain all their basic properties: gloss, water resistance and leveling. Have your maintenance man insist on a floor wax containing “Ludox.” You’ll see that beautiful floors can be safer floors, too.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

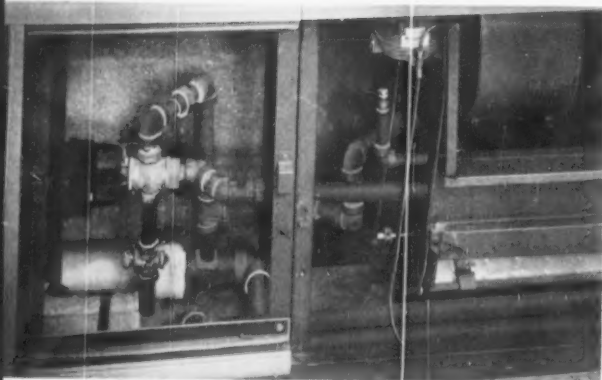
For safety underfoot, specify floor waxes made with

LUDOX®

Colloidal Silica

At Waverly East Elementary School

High Temperature Hot



This photo shows the water supply side of a unit installed at the Waverly School. The temperature of the entering water is 240°. On a full heating cycle, there is a 40° drop through the unit.



Waverly East Elementary School, Waverly, Ohio. Superintendent of Schools: John Teichert; Architects: Howard and Thomas McClorey; Engineers: Marrell and Reik.

BETTER AIR IS OUR BUSINESS



Illinois
Heating Specialties



Herman Nelson
Console Heaters



HerNel-Cool
Year 'round Unit

Water Saves Money

Herman Nelson Unit Ventilators Permit Use of Smaller Valves, Pumps and Piping

The Waverly East Elementary School in Waverly, Ohio, is typical of the many schools which have gained real benefits because Herman Nelson unit ventilators were specified. In addition to providing ideal "classroom climates", the Herman Nelson high temperature hot water system reduced construction costs appreciably. At Waverly, 240° water is circulated; and each unit ventilator can squeeze a full 40° of heat from it. Far less water is required than in a conventional system — smaller pipes, valves and pumps handle the heating job perfectly.

And Herman Nelson economy carries on long after construction is finished! Patented DRAFT|STOP

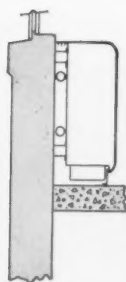
unit ventilators heat only when heat is necessary... *save* fuel when it is not. DRAFT|STOP controls downdrafts without adding to the heat load. Its unique design provides a constant supply of properly *heated* or *cool* fresh air... automatically compensating for temperature changes in the classroom. Pupils are alert and comfortable. Teachers can concentrate on *teaching*—in a healthful atmosphere that is conducive to *learning*.

Every school can enjoy *more classroom comfort per dollar* — the DRAFT|STOP way! Would you like more facts? Write to Herman Nelson Products, American Air Filter Company, Inc., Louisville 8, Ky.

CHOOSING THE RIGHT HOT WATER SYSTEM

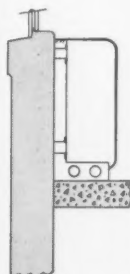
There is no "one best" hot water system. Each school must be considered on its own requirements—de-

sign, structure, and climate. Here are three Herman Nelson systems. Each has its own advantages.



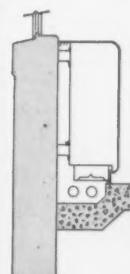
WALL-HUNG PERIMETER PIPING

All piping is contained within the mechanical equipment, and all piping through the unit is furnished, including expansion loops as well as balancing valves and air vents. Piping and hangers with both cabinets and DRAFT|STOP wall are available.



CABINET-BASE PERIMETER PIPING

Supply and return piping is laid on the floor beneath units and cabinets. Easy to install, easy to maintain (any Herman Nelson cabinet can be individually removed). Piping requires no additional building volume and it may be insulated to reduce uncontrolled heat gain.

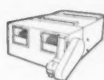


RECESSED-EDGE PERIMETER PIPING

This easily-installed depressed slab system offers definite control of slab edge loss, makes lower-cost insulation possible (insulating material is merely poured over piping). This system is recommended where classrooms have exterior doors that would otherwise have to be looped.

AAF
herman nelson
UNIT VENTILATOR PRODUCTS

American Air Filter Company, Inc.
System of Classroom Cooling, Heating and Ventilating



Herman Nelson
Heating, Ventilating Units



Herman Nelson
Unit Blowers



Herman Nelson
Horizontal Unit Heaters



AAF Dust Control
For School Shops



Herman Nelson
Vertical Unit Heaters

AMERICAN AIR FILTER COMPANY, INC.

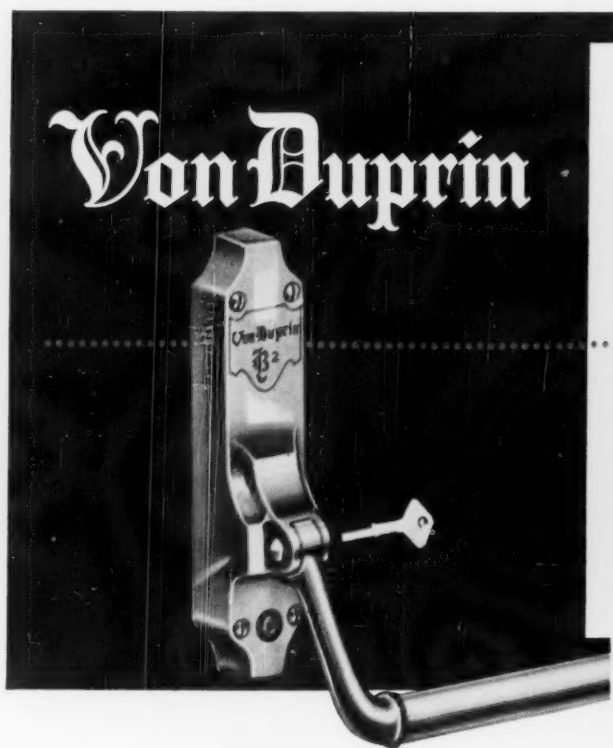


"THE SAFE

Increasing numbers of architects and other safety-minded officials the country over specify Von Duprin exit devices to provide "the safe way out!" And for good reason: Von Duprin's unequalled record of performance! Even under the most adverse conditions, these devices operate efficiently . . . with only normal maintenance.

Since originating fire and panic exit devices in 1908, Von Duprin has consistently paced the field in new designs, incorporating new materials and production methods.

Whether effectively handling the daily flow of traffic . . . or standing ready for that "once-in-a-lifetime" emergency, Von Duprin-equipped doors are your answer to safe, sure exit.



WAY OUT!"

The vertical rod Type B² device, illustrated here, is a part of the complete Von Duprin line of exit devices and auxiliary hardware designed to meet every exit requirement.

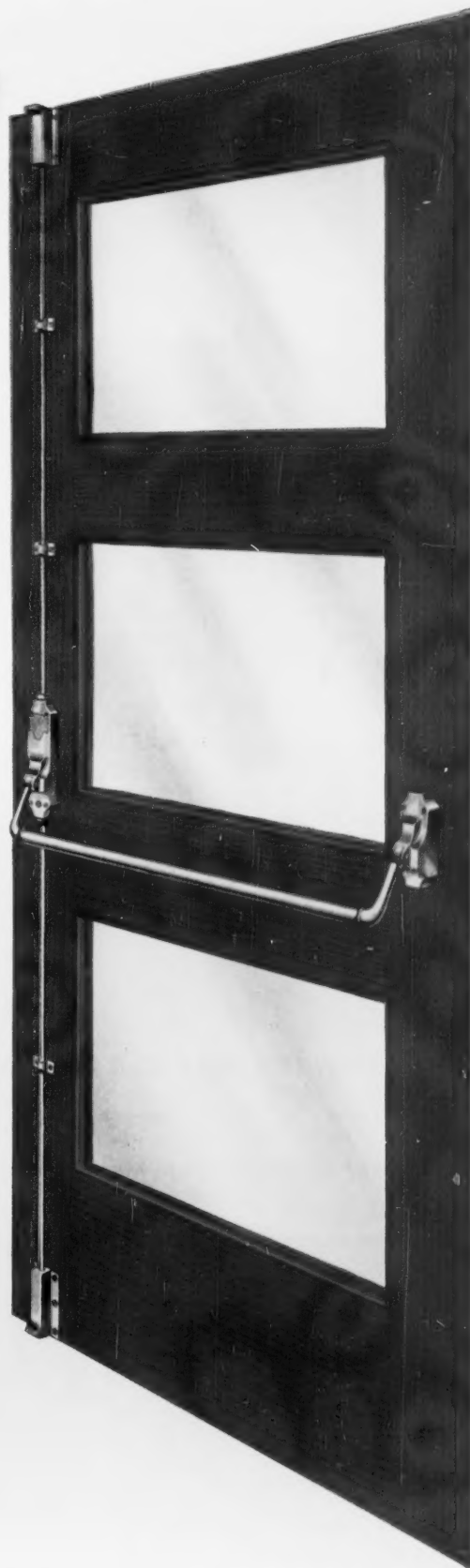
For complete information, or for expert advice on specific exit needs, call on your Von Duprin "Exit Specialist"—either a factory representative or a selected builders' hardware distributor.



VONNEGUT HARDWARE CO.
VON DUPRIN DIVISION
Indianapolis 9, Indiana

FIRE AND PANIC EXIT DEVICES

Type B²
vertical rod or
mortise lock



POWERS Temperature Control

in 1915 and POWERS AGAIN in the new Highland Park High School

"Because of the many years of dependable control obtained from Powers equipment and the prompt service received whenever required in our old buildings, another Powers temperature control system was installed in our new high school which was planned to meet the needs of 2,000 students"

... Mr. E. W. Zaeske, Supt. of Buildings and Grounds.

Functional and architectural features of Highland Park's new high school have been carefully executed to conform to the highest quality of modern school design and to meet the stipulation of keeping future maintenance costs at a minimum.

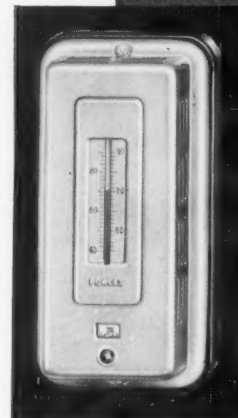
Since 1891, Powers temperature control systems have been noted for their low operating and low maintenance cost. 25 to 50 years of dependable operation with a minimum of repairs is reported by many satisfied users.

Comfort and Fuel Economy in the 87 classrooms and other spaces here are provided by a Powers control system which regulates the following heating and ventilating equipment:

A Powers MASTROL system regulates the temperature of the forced hot water supplied to convectors under the control of a Powers thermostat for each space. Ventilation is provided by Powers controlled fan units located throughout the buildings.

Natatorium is Unique in that provision is made for the comfort of spectators as well as the swimmers. Convectors in the pool area maintain air at 86° F. while spectators are blanketed with air at 76 to 78° F.

If You Are Planning a New School or remodeling an old one, ask your architect or engineer to include a Powers Quality system of temperature control. You will help insure utmost comfort and lowest upkeep cost.



Photos: Hube Henry, Hedrich-Blessing



THE POWERS REGULATOR COMPANY

SKOKIE, ILLINOIS | Offices in chief cities in U.S.A., Canada and Mexico

65 Years of Automatic Temperature and Humidity Control



Symbol of Economy
and Quality Control
(c81)



Typical Classroom



Library



Band Room in Music Dept.



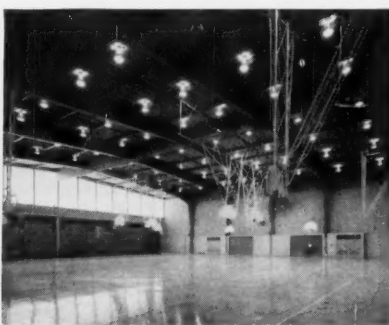
Highland Park, Illinois, High School

Loebl, Schlossman & Bennett, Architects
Samuel R. Lewis, Consulting Engineer
Gust K. Newberg Co., General Contractor
Adelman Heating Corp., Heating Contractor
 All of Chicago, Illinois

Photos below show one of the 87 classrooms and some of the other spaces controlled by POWERS



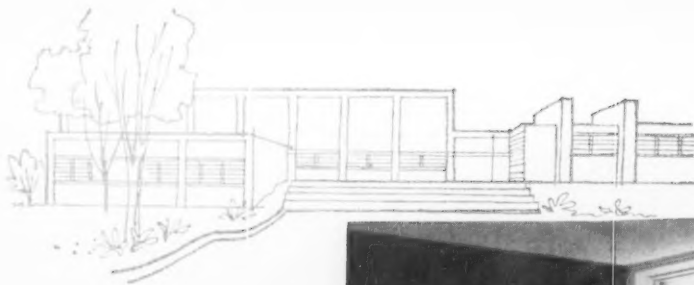
Cafeteria and Multi-Purpose Room



Exhibition Gymnasium

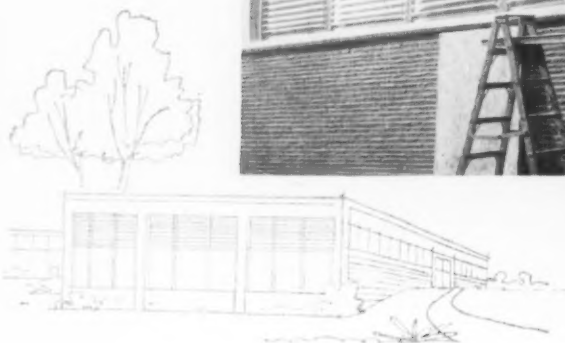


Swimming Pool 50 x 75 ft.



For daylight control glazing

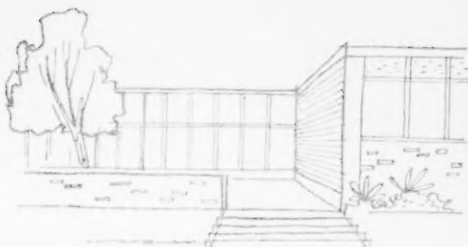
Daylight Louver Panels formed from PLEXIGLAS provide light transmission, daylight control and weather closure in one continuous surface.





For skylights

Dome Skylight units of formed PLEXIGLAS provide efficient, balanced daylighting, eliminate opaque cross-members and joints, are self-cleaning.



For breakage-resistant windows

When impact-resistant, clear or colored PLEXIGLAS is used to glaze windows in high-breakage areas, protective screens are eliminated, maintenance costs are cut to a minimum.

Plexiglas

THE ARCHITECTURAL PLASTIC

Shown on these pages are some of the products, made of PLEXIGLAS® acrylic plastic, that are solving problems in the design of modern schools. PLEXIGLAS is useful in these school applications because it provides the following advantages:

- ... PLEXIGLAS can be formed economically to almost any shape
- ... is light in weight and highly resistant to breakage
- ... is "the outdoor plastic" with time-proved resistance to sun and weather
- ... transmits and diffuses light with highest efficiency

Samples of PLEXIGLAS and the names of manufacturers of products that incorporate this material are available. Just check your specific interest on the coupon and send it to us. The information will be sent promptly.



Chemicals for Industry
**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

Canadian Distributor: Crystal Glass & Plastics, Ltd., 130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada.

ROHM & HAAS COMPANY

Washington Square, Philadelphia 5, Pa.

Please send samples of PLEXIGLAS and the names of suppliers of:

☐ Daylight Louver Panels ☐ Dome Skylights ☐ Window Glazing

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

PL-19

**Quiet
is a
modern
necessity**

Johns-Manville Fibretone ceilings in St. Mary's School, Nutley, N. J., effectively reduce the noise of active children at play... help make teaching easier. Architect: Wm. Neumann and Sons, Jersey City, N. J.



Changing noisy recreation to Quiet child's play!

**Johns-Manville Acoustical Materials meet today's
need for low-cost sound control**

Schools and institutions of all types depend on modern materials to achieve maximum efficiency. That's why practically all new building and modernization specifications include acoustical ceilings to reduce disturbing noise.

Johns-Manville offers a complete choice of highly efficient sound absorbing materials for every acoustical need.

• **J-M Permacoustic® Units**—combine maximum acoustical efficiency with architectural beauty. Has attractive fissured surface. Made of mineral wool, Permacoustic meets all building code fire-safety requirements.

• **J-M Fibretone® Units**—provide high acoustical efficiency at modest cost. Hundreds of small holes, drilled in a Uniform or Variety pattern, act as "noise

traps." Fibretone has a white paint finish. Available with flame-resistant finish.

• **J-M Sanacoustic® Units**—perforated metal panels backed with a fireproof, highly sound-absorbent element. Noncombustible and sanitary. The white baked-enamel finish is easy to keep clean, and may be repainted.

• **J-M Transite® Acoustical Panels**—perforated asbestos-cement facings backed with a mineral wool sound absorbing element. Suitable in areas with high humidity (dishwashing rooms, kitchens, swimming pools, etc.).

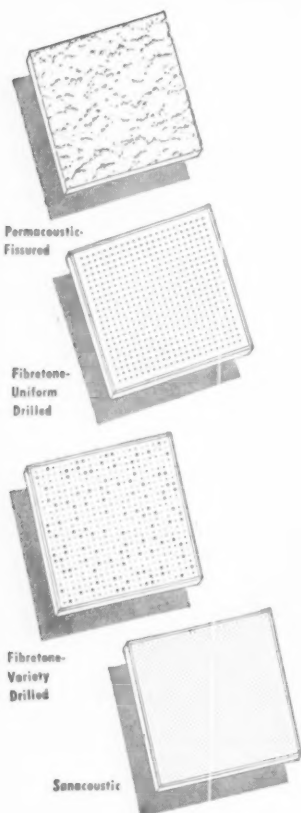
For a complete survey by a J-M Acoustical Engineer, or for a free book entitled "Sound Control," write Johns-Manville, Box 158, Dept. NS, New York 16, N. Y. In Canada, write 565 Lakeshore Road East, Port Credit, Ontario.



See "MEET THE PRESS" on NBC-TV, sponsored alternate Sundays by Johns-Manville

Johns-Manville

45 years of leadership in the manufacture of acoustical materials



introducing the **NEW**

TORNADO®

**13" LIGHT HEAVYWEIGHT
FLOOR MACHINE**

heavy enough to do the job...
light enough for everyone

Everything you've ever needed in a floor machine has been incorporated in the all-new Tornado Model 130. This engineering marvel is powerful, rugged and efficient. It's light enough to be carried by anyone, handles smoothly with no "whip" and is well within the economic reach of every institution, from the smallest to the largest.

Housed in aluminum to avoid all rust and corrosion, the new Tornado Model 130, has a special safety switch for finger tip control, non-marking wheels and a large, soft, white bumper that protects furniture and walls.

Floors glisten and sparkle in a jiffy, operator fatigue is reduced when the new Tornado Model 130 does the job.

Write for bulletin 763
have an on-the-job
demonstration today!

BREUER ELECTRIC MFG. CO.

5098 NORTH RAVENSWOOD AVE., CHICAGO 40, ILLINOIS



commercial lighting

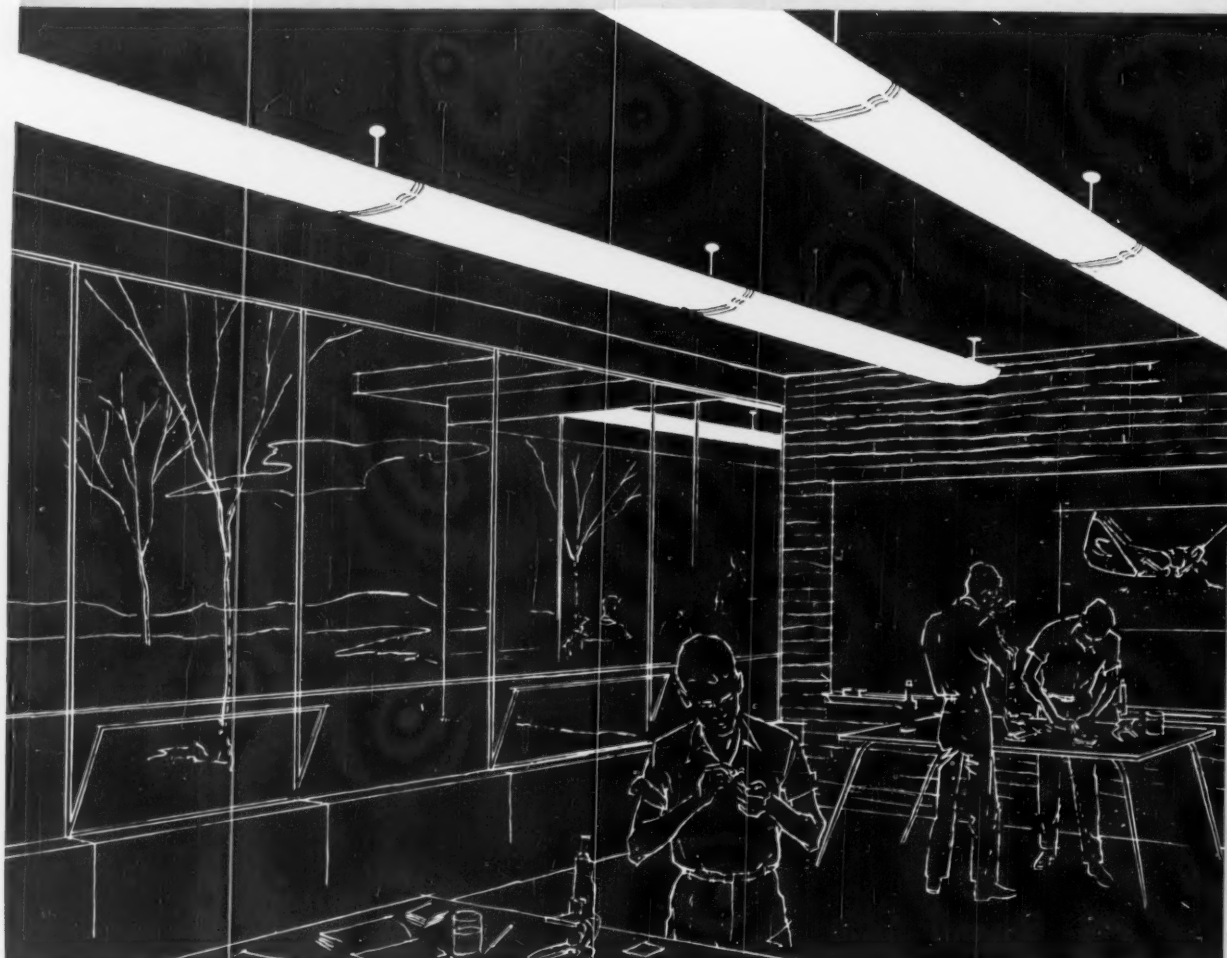
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fluorescent

suspension mounting
for schools, offices,
drafting rooms

descriptive
bulletin

61-150-4

page 1



Westinghouse PB luminaires are recommended where a high quality luminous semi-indirect lighting fixture is required, such as in offices, drafting rooms, and especially in school rooms. The light produced by these units is soft, glare-free and comfortable, permitting long hours of work without eye fatigue.

- 2 and 4-lamp widths
- 4 and 8-foot lengths
- rapid start or slimline lamps
- suspension mounting
- individual or continuous rows

September, 1955

a.i.a. file number 31-F-23

Planning to relight your classrooms?

Get the facts about the new Westinghouse PB luminaire

It's new. It's completely different. It's a modern luminaire that gives classrooms glare-free lighting, distinctively styled to harmonize with contemporary architecture.

The one-piece plastic bottom construction of the Westinghouse PB assures uniform illumination and one-hand maintenance. And the polystyrene plastic is chemically and dimensionally stable and UVR (Ultra-Violet Resistant).

Send for this free descriptive bulletin and compare the design . . . the construction . . . the beauty of the new Westinghouse PB luminaire with your present fixtures. You'll see a remarkable difference. For an on-the-spot demonstration, see your local Westinghouse lighting distributor.

J-04404

WATCH WESTINGHOUSE!

COVER THE PRESIDENTIAL CAMPAIGN ON CBS TV AND RADIO!

Clip and mail this coupon

Westinghouse Electric Corporation
Lighting Division, Edgewater Park, Cleveland, Ohio

Send me your bulletin describing
Westinghouse PB luminaires
(DB 61-150-4).



Name _____

School _____

Address _____

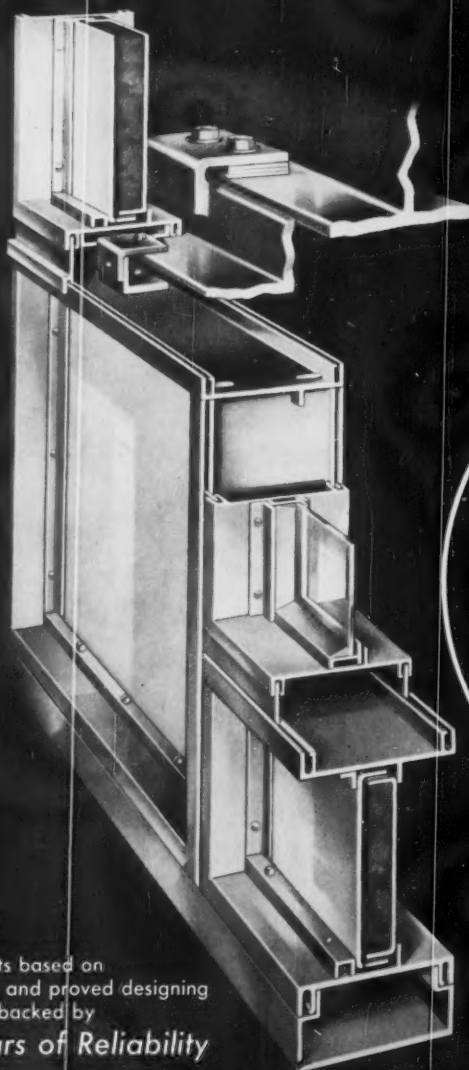
City _____ State _____

Today's Latest Advancement for Versatility of Application

Bayley

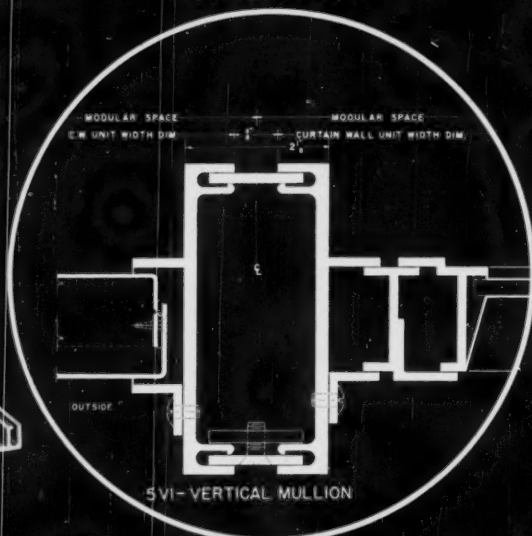
Aluminum CURTAIN-WALL System

Modular or Conventional
Series A-450



Progressive
advancements based on
fundamental and proved designing
backed by

76 Years of Reliability



With Bayley's sub-frame designs you can achieve distinctive, individualized curtain wall treatments, of almost unlimited variety, without the costliness of special window designing. Standard Bayley Aluminum Projected Windows, with heavy channel frames and a choice of ventilator arrangements, serve as the basic unit . . . and at the same time afford the maximum in air, light and vision. Combining versatility of application with standard details and sections. Bayley can help you accomplish some surprising and exciting things.



WHITEHALL JUNIOR HIGH SCHOOL—
Baltimore Township, Allegheny County, Pa.
Architect—Altenhof & Bawn, Pittsburgh, Pa.
Builder—Brownsville Construction Co., Brownsville, Pa.



See Bayley's catalogs in Sweet's . . . aluminum windows 17a/Bay; and steel windows 17a/Ba; or ask us for individual reference-file copies. Write for special file on Bayley Curtain Wall Ideas, Designs and Details.

The WILLIAM BAYLEY Co.

Springfield, Ohio Agents in All Principal Cities

District Sales Offices:

Springfield • Chicago 2 • New York 17 • Washington 16



Your own semi-skilled maintenance men can apply long wearing easy-to-clean Formica to nearly any worn and scratched horizontal or vertical surface.

Apply colorful patterns or rich wood grained Formica on student and teacher desks, cafeteria tables, home economic kitchen tops and walls. Formica is unharmed by boiling water and mild acids and alkalis — resists scratching — never needs painting or refinishing.

There is a large warehouse stock of Formica sheets near your school. A Formica representative will be happy to explain techniques and costs. Look in the Yellow Pages under "Plastics" or fill in the coupon.



Subsidiary of **CYANAMID**

FORMICA CORPORATION

4574 Spring Grove Ave., Cincinnati 32, Ohio

We are interested in Formica surfacing for our school.

Please have a representative call for an appointment to discuss:

- ☐ Formica applied by our own workmen.
☐ Recommend a regular professional fabricator.

Name _____ Title _____

School _____

Address _____

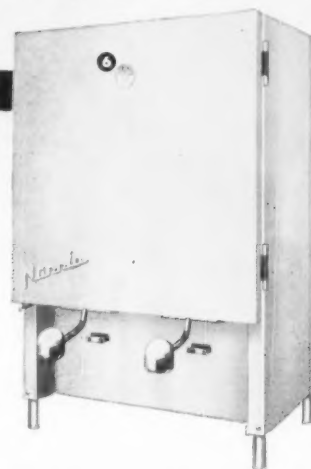
City _____ Zone _____ State _____

Now...serve more milk at less cost with the all-NEW
Norris SUPER MANHATTAN DISPENSERS



14 GREAT NEW FEATURES

- 1 NEW, SIMPLIFIED 2-PIECE VALVE for easiest possible cleaning. Keeps milk ice cold.
- 2 NEW REFRIGERATION UNIT—simpler, quieter.
- 3 NEW, HEAVIER DOOR—added insulation.
- 4 NEW VINYL DOOR GASKET—fits tighter, cleans easier.
- 5 ROUND-CORNERED INTERIOR—a breeze to clean.
- 6 INSIDE TEMPERATURE INDICATOR ON DOOR.
- 7 NEW APRON—round-cornered, no cracks or crevices.
- 8 NEW DRINKING GLASS GUIDE—for spill-proof filling.
- 9 NEW SHUTOFF PLATE—even air cannot reach the tube.
- 10 NEW TEMPERATURE KNOB on side of cabinet, for finger-tip control.
- 11 ADDED SPACE INSIDE for easier loading.
- 12 REFRIGERATION COMPARTMENT COMPLETELY SCREENED.
- 13 EASY ACCESS TO COOLING UNIT by removing rear chimney.
- 14 FRONT LEGS ADJUST, front or back, to fit any counter.



SPARKLING BEAUTY of design, materials and craftsmanship make the Super Manhattan a powerful new merchandiser of milk. Stainless steel cabinet, all exterior hardware heavy chrome plated.

It's a new kind of milk dispenser...

as different from early models as day is from night. And there's a Super Manhattan exactly right for *your* needs—1, 2, and 3-valve models, capacities 5 to 15 gallons.

Every "extra" you ever hoped for is yours in the Super Manhattan. Delivers milk colder and tastier. Stays spotlessly clean, inside and out, with less work. Gives you precise temperature control at your fingertips . . . and milk stays colder from top to bottom.

Want detailed specifications and prices? Write us today: Norris Dispensers, Inc., Dept. NS-96, 2720 Lyndale Ave. South, Minneapolis 8, Minnesota.



Norris
MILK DISPENSERS

2720 Lyndale Ave. So., Minneapolis 8, Minnesota

Another new development using

B.F. Goodrich Chemical raw materials



Desks in new Edgelea School, Lafayette, Indiana, were made by American Seating Company, Grand Rapids, Michigan, using vinyl foam upholstery material produced by Brown Rubber Company, Lafayette, Indiana.

THEY'RE SITTING PRETTY TODAY... on Geon foam!

HERE is the first elementary-school use of vinyl foam cushioning—a far cry from the hard seats in the little red schoolhouse!

This "expanded" plastic—made from Geon polyvinyl materials—is springy, comfortable, and flame resistant. A separate covering material for the foam is not required, as the vinyl is embossed to furnish its own surface. The cushioning is attractive and durable, withstands moisture, mildew, and the rough usage of which children are capable.

Geon is a remarkable plastic raw material which has opened markets to many new products. Geon foam serves as cushioning and safety padding, rigid Geon in corrosion-resistant piping and ductwork, flexible Geon in electrical insulation and wall covering, Geon coatings for packaging materials, metals, textiles.

For new booklet describing the many ways in which you can use Geon write Dept. NS, B. F. Goodrich Chemical Company,

3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.



B.F. Goodrich Chemical Company
A Division of The B.F. Goodrich Company

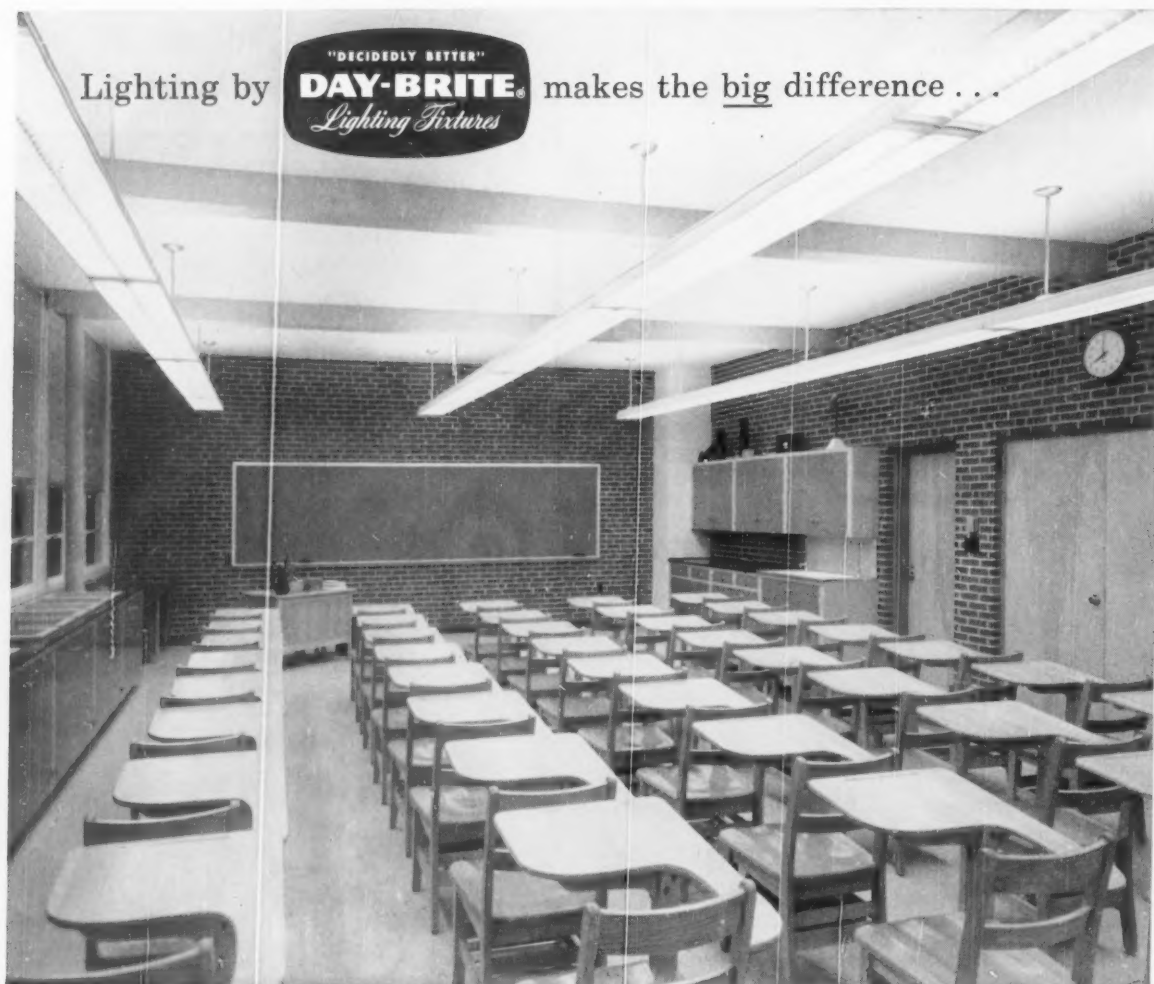


GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors

Lighting by

"DECIDEDLY BETTER"
DAY-BRITE®
Lighting Fixtures

makes the big difference . . .



Day-Brite LUVEX® school-lighting fixtures installed in Concord City Schools, Concord, N. C.

Day-Brite
school lighting
takes the strain
out of seeing

From one end of a schoolroom to the other—from desk tops to chalk boards—Day-Brite school lighting provides an over-all pattern of eye-comfort illumination. It makes the big difference in seeing and learning—benefits pupils and teachers alike.

Before you decide on any phase of school lighting or re-lighting, see, examine and compare the many Day-Brite advantages. Ask your Day-Brite representative to show you why more schools have installed more Day-Brite LUVEX school lighting fixtures than any other make. Look for him in your classified phone directory. Or, send for school-lighting literature.

Nation's largest manufacturer of commercial
and industrial lighting equipment



61124

Day-Brite Lighting, Inc.
5451 Bulwer Ave.
St. Louis 7, Missouri

In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario

**Garden City High School,
Garden City, L. I., N. Y.**

Architect: Eggers and Higgins

Acoustical Contractor: Wm. J. Scully Acoustics Corp.

Acoustical Material: Armstrong Minatone



Home-making classes can work comfortably, efficiently under a beautiful, noise-quieting ceiling of Armstrong Minatone.

Noise-quieting ceiling chosen for beauty . . . durability . . . easy upkeep

Three factors were vital in selecting interior finish materials for Garden City's new high school. The materials had to be attractive, able to withstand rugged service, and economical to maintain. Satisfying all three of these requirements, acoustical ceilings of Armstrong Minatone were installed in most areas of the school.

Minatone is a highly efficient mineral fiber material that soaks up as much as 90% of the noise that hits it, keeps school noise under control at all times. It is completely fire safe and will not ignite or aid the spread of flame in any way.

Beautiful . . . Full Random Minatone's attractive pattern of random perforations eliminates the old-fashioned tiled ceiling effect, helps promote a cheerful, non-institutional atmosphere.

Durable . . . A rugged material, Minatone will not crack, chip, warp, or peel . . . makes a permanently beautiful ceiling. Nor will cleaning or repainting reduce its acoustical efficiency.

Easy to keep clean . . . Minatone's smooth white finish needs no more upkeep than ordinary ceilings, stays new looking for years. And Minatone makes a permanent ceiling that never needs costly repairs.

Free booklet . . . "Quiet at Work," shows how Minatone and the full line of Armstrong sound-conditioning materials can work for you by increasing comfort and efficiency. For your copy, write Armstrong Cork Company, 4209 Wabank Avenue, Lancaster, Pa.



Armstrong

ACOUSTICAL MATERIALS

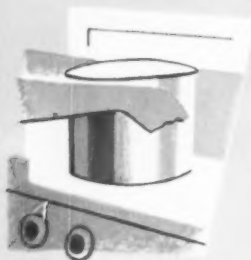
Cushiontone® • Travertone® • Crestone® • Minatone®
Arrestone® • Corkoustic® • Perforated Asbestos Board

*TRADE-MARK

Why squander man -

IS IT WORTH IT? COMPARE HEINZ

OLD-FASHIONED



MAKE THE STOCK



SELECT THE VEGETABLES



WASH



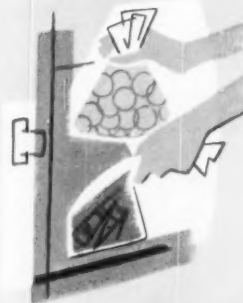
CHOP



SEASON



ADD FINAL INGREDIENTS



RETURN EXCESS TO REFRIGERATOR



CLEAN UP



Compare the labor, then the flavor...FREE

A bowl of Heinz soup costs you so little that it's a downright waste of costly manpower to make your own. You can prepare a day's supply of Heinz Soup in 10 minutes working time. No left-over problems, either.

But only by *tasting* Heinz Soup can you judge the flavor. So we would like to send you a Chef-Size tin of Heinz Soup, absolutely free, so you

can judge the flavor and quality for yourself.

No obligation, of course. Choose any of the 16 varieties listed at the bottom of this page. Compare it with the soup you are now making in your own kitchen. Let your own labor costs and your own tastes decide. Fill in the coupon and mail it for your free Chef-Size sample tin of Heinz Soup today. You'll be glad that you did.

HEINZ CHEF **57** SIZE **SOUP**

YOU KNOW IT'S GOOD BECAUSE IT'S HEINZ

Bean • Beef with Vegetable • Chicken Noodle • Clam Chowder • Chicken with Rice • Cream of Chicken • Genuine Turtle • Cream of Mushroom • Cream of Tomato • Cream of Celery • Split Pea • Vegetable with Beef Stock • Vegetarian Vegetable • Beef Noodle • Cream of Pea • Chicken Consommé

hours making soup?

SOUP AT OUR EXPENSE AND SEE!

WAY



HEINZ WAY



MAIL FOR FREE CHEF-SIZE TIN OF HEINZ SOUP

H. J. Heinz Co., P.O. Box 28-D7, Pittsburgh 30, Pa.

I'll compare and see for myself. Send me a free Chef-Size tin of Heinz Soup.

Variety _____
(choose any soup from listing at bottom of opposite page)

Name _____

Affiliation _____

Street _____

City _____ Zone _____ State _____

Heinz 51-oz. Chef-Size Soups are condensed—one tin makes two.

*How to wash a window this clean
in 23 seconds*



SPRAY



WIPE



ADMIRE!



Sparkling clean windows can be just that easy.

Holcomb *Window Cleaner Concentrate* does the work—not you. It takes only half as long as ordinary washing.

This quick cleaner cuts greasy deposits on contact, instantly loosens and dissolves sticky soot and dirt. You merely wipe lightly. The glass dries before your eyes . . . clear and clean. Holcomb *Window Cleaner* leaves no powdery dust, no oily film to catch fresh dirt.

Just one more thing. Holcomb *Window Cleaner* is packed double strength to save you money. Just add an equal portion of water. Then say goodbye to window dirt.

Your Holcombman will be glad to give you a demonstration

HOLCOMB SCIENTIFIC CLEANING MATERIALS

J. I. Holcomb Mfg. Co., Inc., 1601 Barth Avenue, Indianapolis, Indiana
NEW YORK • DALLAS • LOS ANGELES • TORONTO

A SIMPLE, EASY WAY TO TAKE ADVANTAGE OF U.S. SCHOOL MILK PROGRAM

**Government agency urges increase in
student milk consumption for better health**

Students drink more milk when it is available throughout the school day. For an example: when milk venders were placed in Chicago schools, children consumed 70% more milk; in a Woodstock, Illinois, school with 660 students, 400 one-half pints were vended daily; and, 240 students in a Wisconsin school consumed 2800 full pints in one month. With an Ideal Milk Vender in your school, healthful, dairy-fresh milk is made available to students during all out-of-class moments. It is dispensed refreshingly cool under sanitary conditions. A coin-operated Ideal Milk Vender operates efficiently—needs no attendant.

Its dry refrigeration completely eliminates watery messes.

Investigate now how an Ideal Milk Vender increases milk-drinking among students, and pays for itself under the new U. S. School Milk Program.



Model 70M



Model 300-M



For complete information on how you can have an Ideal Milk Vender as part of your U.S. School Milk Program, write today to:

Ideal DISPENSER CO.

Dept. 2004 BLOOMINGTON, ILL.

Factories in Bloomington, Illinois; Columbus, Ohio;
Ideal Vender Company of Canada, Ltd., Montreal, Quebec

**THERE IS AN IDEAL SELECTIVE VENDER
FOR EVERY SCHOOL REQUIREMENT**

ATTENTION!

You should inspect folding chairs like a first sergeant because folding chairs must do battle as required of no other furniture. Here are some of the CLARIN advantages . . . inspect them before you decide.



CLARIN CHAIRS BUILT

Double tube and channel construction is far stronger than single tube. Pivot holes are always in channel, not in tubes.

Solid steel rivets are used at all pivot points for extra long life.

X-type frame is superior in strength to cheaper Y-type design . . . is self-leveling and will absorb extreme shock.

Spot welding of stationary metal to metal contact points eliminates rattle and noise of riveted construction.

Patented rubber feet wear much longer than common crutch type, slip-over feet. Foot is molded over tensioned designed, brass plated prong that cannot be removed by hand.

Proper angle of seat to back has been scientifically determined to assure correct posture.

Wood Seats are in all Clarin chairs for comfort, durability and health's sake. Completely enclosed by a steel frame yet easily removed and turned over for a "factory fresh" surface.

Guarantee date stamped in steel is obvious assurance that you purchased the best. Every Clarin chair is guaranteed against breakage for ten years.

QUALITY IS THE ONLY TRUE ECONOMY...AND



QUALITY

TO WITHSTAND RUGGED SERVICE

Over thirty years of experience have proved to us that higher quality and more rugged construction must go into folding chairs than into permanent seating. That's why CLARIN Folding Chairs have all of the quality advantages you see on the opposite page. When it's your responsibility to specify or purchase folding chairs, it's a good thing to know that CLARIN chairs will not accidentally collapse if stood upon, and that CLARIN chairs will fold automatically if knocked over in panic. And, it's also a good thing to know that CLARIN chairs can be set up and taken down in shorter time and that, because they fold flat within their frame, they can be stored in 30 to 40% less space. There are over 65 different models in the CLARIN line, so there must be a model or models just right for your needs. Why not write for a catalog now?

CLARIN MANUFACTURING CO.

Dept. 14

4640 West Harrison Street
Chicago 44, Illinois



Juvenile folding chairs correct for every age—seat heights graduate each inch from 12" to 18".



A folding chair for every purpose—wide selection of models and colors—choice of seat and back upholstery styles.



Tablet Arm Folding Chairs serve many needs—ideal for lectures, group meetings, training classes, adult education, etc.

SETS NEW STANDARDS FOR SEATING



A fresh air seat for *no sleepy corners . . .*

TRANE

*Unit Ventilator with
Kinetic Barrier Action
ventilates every corner . . .
every minute of the day*

Students need fresh, wholesome air to stay alert, attentive. Not just by the window, not just on warm days—but in every corner of the classroom, all day long, every month of the year! Ordinary heating-ventilating systems leave sleepy corners and stale air spots . . . with some seats cold and drafty, while others are hot and stuffy.

TRANE Unit Ventilators blend and distribute fresh, filtered air gently—evenly—to every corner of the room, *every minute of the day*, every season of the year. Every pupil in the room has a fresh air seat—all

day long! That's because *only* TRANE Unit Ventilators have exclusive *Kinetic Barrier Action* that give you *powered ventilation* across the entire length of outside wall or window. And with TRANE Unit Ventilators, wasteful overheating is virtually eliminated. Students have an ideal climate for learning—at the lowest possible heating cost!

Ask your architect, contractor or consulting engineer about TRANE Unit Ventilators for your school. Have him contact his nearby TRANE Sales Office—or write TRANE, La Crosse, Wis.

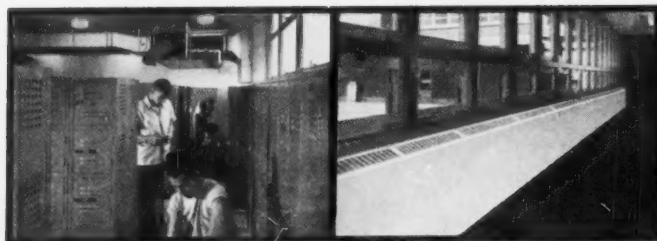


How Kinetic Barrier Action works: Air—warm or cool, as called for by the room thermostat—is delivered under pressure from *wall to wall* extensions. As it reaches the ceiling, it picks up room air . . . creates a gentle, circling flow of uniform ventilation across the entire room. And the room warms up *fast* . . . instant response to thermostat stops wasteful overheating, provides fast morning warm-up. Never a hot spot, cold spot, stale air pocket anywhere—any time! A fresh air seat for every pupil in the room!

TRANE stops drafts before they start! This smoke test shows how TRANE Unit Ventilators are solving the window downdraft problem with *positive* protection. Chilled air from icy window panes is blocked by an upward rising column of tempered air across the entire window. Unlike systems that depend upon wall-length heating elements, the TRANE Kinetic Barrier Action stops window drafts *full-time*—even when the thermostat has shut off room heat. There's an ideal climate for learning—all day long!



every pupil in the room...
no stale air spots . . . no drafts!



In the gym, locker room or auditorium, TRANE *Volume Ventilators* ventilate and heat. For entryways, *Force-Flo Heaters* stop cold drafts. Heat large open areas with TRANE *Unit Heaters*.

For halls, stairways, windows, use TRANE *Convectors*. In shops, pools, TRANE *Wall-Fin* heats on a budget. For offices, *UniTrane* units heat, cool, ventilate. TRANE *Steam Specialties* save fuel.

For heating, cooling, ventilating...
For any air condition, turn to

TRANE

MANUFACTURING ENGINEERS

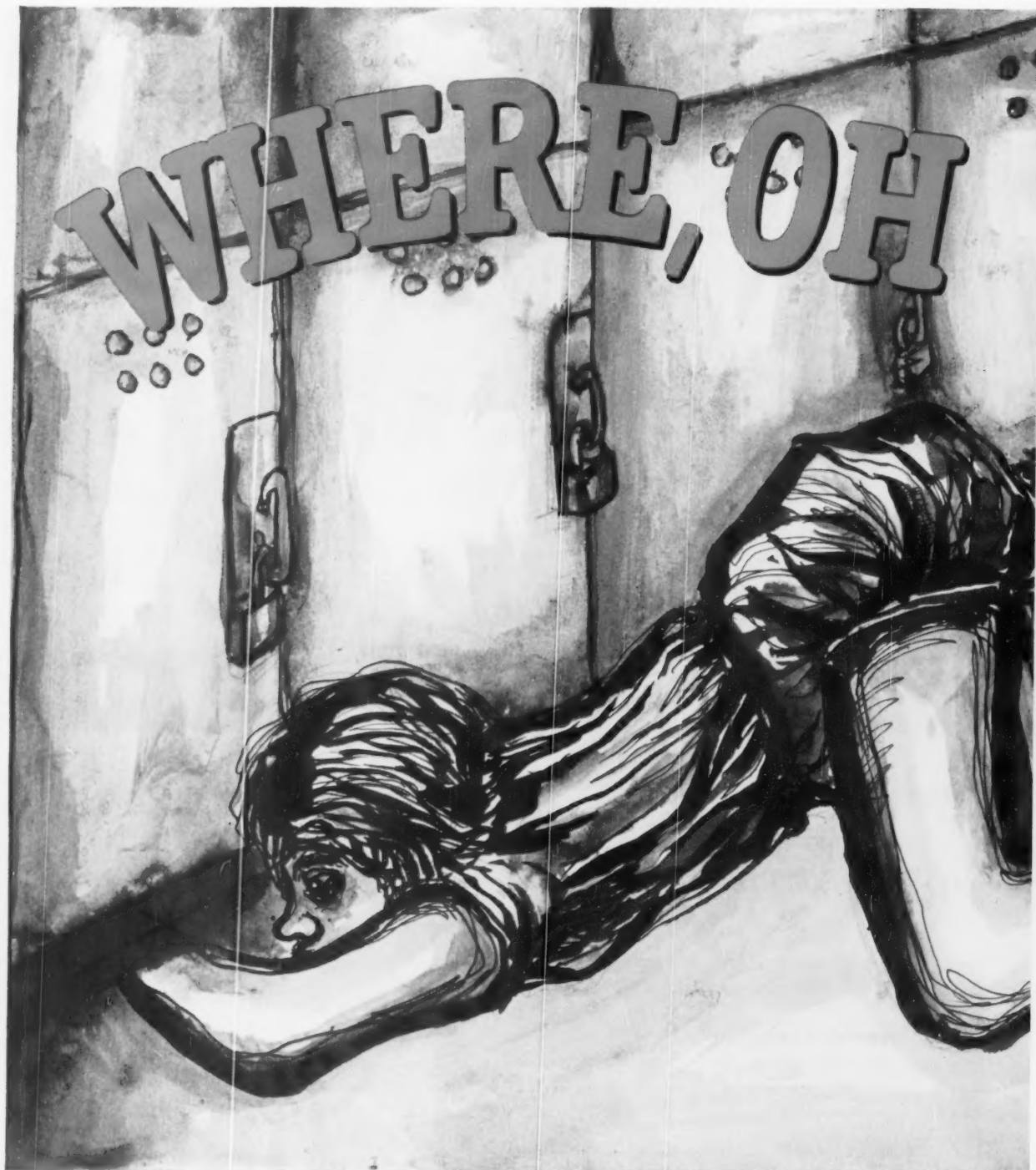
THE TRANE COMPANY, LA CROSSE, WIS. • EASTERN MFG. DIV., SCRANTON, PA.
TRANE COMPANY OF CANADA, LTD., TORONTO • 80 U.S. AND 18 CANADIAN OFFICES



The locker key problem as students see it

Susan Rechtman, illustrator

Student, Abraham Lincoln High School
Brooklyn, N. Y. Teacher: Leon Friend





has that locker key gone?

No justice. There it was—then it wasn't. And an important math test next period. Sort of thing happens too often. Get a key on a deposit. Lose the key, lose the deposit. Wait for a refund at the end of the year. Wait for a new key if you lose one. Wait, wait, wait. Wonder the school can afford it! Wonder there aren't Yale Combination Locks on all the lockers. Personal combinations—no keys to lose. Strong locks, easy to use. Keep things safe. Practically no paper work for the school—no key control system. So very simple. And never so important as right now. Why not write? The Yale & Towne Manufacturing Company, Lock & Hardware Division, White Plains, N. Y.

YALE & TOWNE



YALE NO. 515.
Up to 10,000
combinations.
Rustless case.
Aluminum finish.



YALE NO. 516.
Like 515 but
opens to custodian
control key.

The simple solution:
Yale* Combination Locks

*YALE REG. U. S. PAT. OFF.

MORE

**Cook-ability
for every \$ you invest!**

SPECTRO-HEAT HOT TOP! Seven Front-Fired Burners provide heat where it's wanted, when it's wanted.



See Garland
Visit Your Dealer Week
September 17-21

GARLAND

MORE Efficient Operation

GARLAND UNITS are designed and aligned to work together—to make your kitchen operation more convenient and efficient. Your entire staff can cook more meals better, easier and faster.

MORE Economical

PRECISION ENGINEERED, Garland is built to produce maximum heat on minimum fuel and to utilize that heat to the fullest advantage. Highly efficient insulation prevents waste and heat loss.

MORE Advanced Features

AUTOMATIC OVEN LIGHTING is just one of the many available Garland features. A turn of the oven valve lights the oven. No matches. No stooping. Many other features save food, fuel and time.

No other cooking equipment gives you Garland performance! No other cooking equipment gives you Garland value! Yes, on every count — cook-ability, economy, efficiency, advanced design — Garland is the recognized leader!

That's why it always pays to investigate Garland before you buy! A comparison will prove to you that Garland gives you more for every dollar you invest! Leading food service equipment dealers everywhere recommend and sell Garland. See Garland before you buy!

All Garland Units Are Available in Stainless Steel and Equipped for Use with Manufactured, Natural or LP Gases

"92 Years of Leadership"

GARLAND

Heavy Duty Ranges • Restaurant Ranges • Broiler-Roasters • Deep Fat Fryers • Broiler • Griddles • Roasting Ovens •
Counter Griddles • Dinettes Ranges

Products of Garland Division, Detroit 31, Michigan

Welbilt CORPORATION

IN CANADA: GARLAND BLODGETT LTD., 1272 CASTLEFIELD AVE., TORONTO

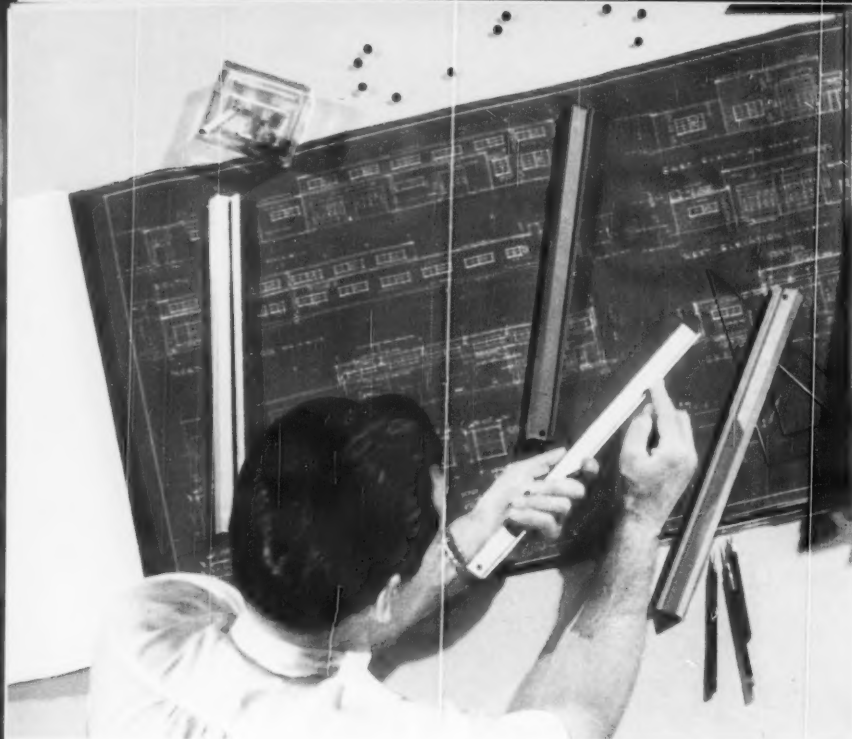


Announcing...

FENLITE

Fenestra's distinctive new window

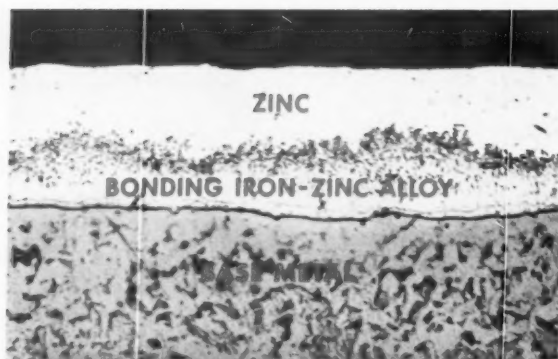
finish that needs no painting!



exclusive

You can see the difference between FENLITE and ordinary metal windows. The distinctive FENLITE Finish adds new beauty to any building. Its lifetime corrosion protection *without paint* assures lowest maintenance costs. Ask your Fenestra Representative to show you a sample, today!

Prove the difference yourself! This bend-bar test demonstrates the stronger bond of FENLITE compared to ordinary galvanizing. Ask your Fenestra Representative to let you try it in your own office!



Here's the alloy bond of lifetime zinc to steel that assures complete corrosion protection, year after year, without painting. FENLITE protection is *self-healing*, too! Pinholes and scratches in the surface are automatically filled in by sacrificial action of the zinc. The steel window surface is protected . . . always!

► 8 important steps required to produce FENLITE



Vapor
Degreasing



Pickling



Rinsing



Fluxing



Dry

Fenestra[®] FENLITE process

gives you steel-strong windows
with NEW BEAUTY
and DURABILITY!

Now, here's what you've been looking for in windows . . . distinctive appearance . . . lifetime corrosion resistance without painting . . . plus, the strength of steel. The New Fenestra FENLITE Process gives you all three of these important advantages. *And, it costs no more than an ordinary steel window with two-coat field painting.* This exciting new window finish is produced by an exclusive Fenestra process developed through years of research and testing.

Briefly, this new process protects the steel window with an alloy-bonded lifetime zinc surface. Then, a special treatment "passivates" and chemically polishes the zinc for longer life and a gleaming finish. Standard 20% salt spray tests indicate that resistance to the start of white corrosion of the zinc is increased 3 to 12 times by this treatment. It also prepares the window for a tight glazing compound bond and for decorative painting, if desired. *Maintenance protective painting is not required!*

The FENLITE Process requires precision electronic control of every step in the manufacturing process. *The windows must be completely submerged in one dip in each bath.* Only Fenestra's specially designed "million-dollar" plant has facilities adaptable to this new process. This plant—the only one of its kind in America—has been "changed over" to produce this new finish.

You have to see FENLITE to fully appreciate its new beauty and durability for your buildings. Your local Fenestra Representative—listed in the Yellow Pages—can show you a sample now. Call him, today, or write FENLITE, Fenestra Incorporated, 2250 East Grand Boulevard, Detroit 11, Michigan.



Zinc-
alloying



Passivating
& Chemical
Polishing



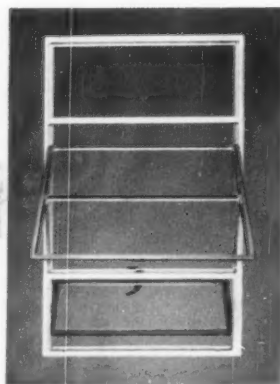
Final Assembly

FENLITE

now available on all *Fenestra* windows!

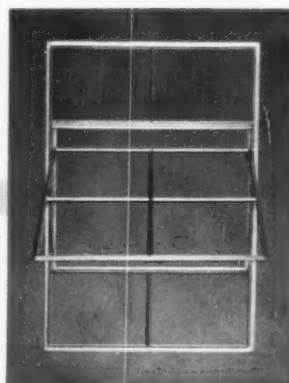
Fenestra Intermediate Windows

High-quality, low-cost steel windows designed to provide draftless ventilation, abundant lighting, easy screening and cleaning and many other advantages for schools, hospitals, clinics, stores, commercial buildings, restaurants, religious buildings, office buildings and other monumental structures. Their slim, modern lines enhance any architectural concept. Available in a wide variety of designs, sizes and types to meet your specifications.



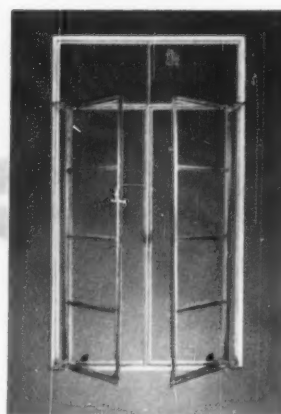
Fenestra Industrial Windows

A complete line of high-quality steel windows for all industrial and commercial buildings. Includes Commercial Projected Windows for plant office areas, Pivoted Windows for manufacturing areas, Continuous Windows for factory skylights and monitors, and Security Windows for "built-in" prowler protection in plants and warehouses. A complete selection of types and sizes.



Fenestra Residential Windows

For fine homes and apartment buildings, Fenestra Residential Windows with the New FENLITE Finish combine lifetime corrosion protection with the advantages of Color-Styling by decorative painting, if desired. Choose Fenestra Casement Windows, with or without muntin bars, Projected (Awning) Windows, or WindoWalls to make any home more beautiful and comfortable. Basement and Utility Windows are also available with the New FENLITE Finish.



Fenestra
INCORPORATED

General Offices: 2250 East Grand Boulevard, Detroit 11, Michigan

Local Representatives in 200 Principal Cities. See "Fenestra Building Products" in your Telephone Directory.

Your Single Source of Supply for DOORS—WINDOWS—BUILDING PANELS

Looking Forward

Wright May Be Right

FRANK LLOYD WRIGHT, the great architect, is consistently arrogant in his criticism of this nation's educational system. His recent article in *Collier's* avows that "our educational system has let this country down." This is the same opinion he expressed eight years ago in an interview published in *The NATION'S SCHOOLS*. At that time (November 1948, pp. 20 to 24), he said to readers of this magazine:

"Our big schools are just knowledge factories. Children growing up close to nature are perfectly good plums. Send them to school—and you get perfectly good prunes. You don't get civilization by way of science. You can't substitute science for art, philosophy and religion. What are we turning out with all our magnificent scientific equipment? Slums of the soul!"

Commanding greater interest is Mr. Wright's opinion of school architecture. As for our school buildings, he told *The NATION'S SCHOOLS* representative, he would burn them—and many of the books.

"The big American knowledge factory is a self-defeating institution and will be abolished," he said eight years ago. "The factorylike schoolhouses of today, as disreputable characters as gangsters and idiots, must all go, along with the Gothic and other period buildings masquerading in costumes."

What kind of building, then, would Mr. Wright recommend? His dreams expressed only eight years ago are beginning to take tangible form in some of the new schoolhouses today, especially the dividing of the school into smaller units and the placing of schools in pleasant, natural surroundings.

"The school building will be small," he said, "and will be divided into still smaller units. Groups of these buildings can be arranged around an interior or exterior court. Each building will be only one story high. School buildings will be fashioned of metals and glass or of fireproof native materials. Along the school courtyards will be individual flower and vegetable beds. Beyond the courts and gardens will be large game and play spaces."

His prophecy for the future status of the teacher is indeed a wonderful dream. "There will be," he said,

"one teacher for every 15 to 40 children, and these teachers will be the best paid, best qualified, most important members of society—preferred stock. Out of such teaching and such school and city environment, the child can grasp the 'sense of the altogether.'"

You'll find it worth the effort to look up this five-page, fascinating interview with Mr. Wright in the November 1948 number of this magazine.

Vision or Vertigo?

MY INSTRUCTOR says that if you do not have the vision to see through clouds, don't go in them. But it seems in life we humans find ourselves quite often in a state of vertigo—flying blind."

This analogy was part of the commencement address given by William W. Caudill, nationally known school architect from Bryan, Tex., when he received the honorary degree of doctor of laws at Eastern Michigan College this summer.

Dr. Caudill was describing his experiences in learning to fly his own plane. His instructor had told him: "When you get into a cloud you lose all sense of direction. In fact, you lose all senses. When you feel you're going up, you may be going down. When you feel you're going fast, you may be going slow, and when you feel you're going slow, you may be going fast. Or when you think you're turning to the right, you may be turning left. And if you're not an instrument pilot with the proper instruments, you'll inevitably get into a slow bank which inevitably results in a suicide spiral."

Nations, too, suffer from vertigo, or "dizziness of the head," he warned. "France couldn't see beyond the end of her Maginot Line. In this country the 1929 crash sent us into a degree of vertigo. The recent announcement that Russia and her bombs could destroy us by 1959 could itself be enough to destroy us without the bomb—if we slip into a state of vertigo. Fortunately, our leaders have the vision to see beyond the bomb threat."

As an example of vision at its best, he cited the manner in which a dome-like auditorium was constructed in Albuquerque, N.M. Ordinarily, the building of concrete domes is not attempted because of the great expense involved in constructing the wood

forms. But these architects had real vision. "They went out on the edge of town where the auditorium was to be built and where there were large sand knolls. All they did was to take a bulldozer and work one of these knolls to the desired shape. They put over the building paper, laid down the necessary reinforcing steel, and then poured the concrete down over it. After the concrete had cured to the desired strength, they simply removed the dirt, and they had themselves an auditorium.

"So it all goes back to the individual," concluded Dr. Caudill. "You must have vision. You must see where you are going. If not, vertigo will result."

And his concluding advice to the graduating class is equally important for those of us who are on the firing line, *i.e.* "The main thing is to like your work, to be excited about it, and to believe that you can make a real contribution in making this world just a bit better place to live in. Believe that you are pioneering in a new, wonderful world of opportunities. Look ahead. Dream dreams, if you must. People with vision do. 'Where there is no vision, the people perish.'"

The Case for Junior Colleges

DURING the years between World War I and World War II, education for the average citizen increased by more than four years, reports Chicago's general superintendent, Benjamin C. Willis. "For the citizen of the future," he writes, "high school graduation will be a *minimum* level of accomplishment. More than half of our young people will take advantage of the additional educational opportunities beyond high school. The junior college, under the control of local boards of education and with a program developed in answer to local needs, has a significant rôle to play in meeting this challenge."

The report to Chicago's board of education culminates two years of intensive study by nine members of the Chicago staff. It proposes a 16 year, multi-million dollar expansion program for Chicago's junior college system.

The junior college is distinctly a phenomenon of the Twentieth Century. In 1900 there were only eight junior colleges, all of them private. In 55 years, enrollment has increased from 100 students to nearly 700,000 in approximately 700 colleges. California sets the pace with six out of every 10 college students enrolled in junior colleges.

The Chicago report directs attention to changes in the economic and social picture which make a junior college more than ever an essential part of the public school ladder. The committee concluded that the junior college is needed to serve the many high school graduates who want additional education but are not interested in a four-year program leading to a degree. More and more, industries are requiring greater skills than a high school graduate possesses, and yet the traditional curriculum of colleges and universities does

not offer technical or semiprofessional education for such occupations.

The report further observes that the occupational center of our economic system is shifting from the producing industries to the distributive and service trades, and therefore the junior college is needed to prepare more students for employment as bookkeepers, medical secretaries, clerks, recreational leaders, life insurance and real estate salesmen, factory foremen and supervisors, and laboratory and educational technicians.

And what would the curriculum be?

Maintaining that "the junior college has its own philosophy and functions," the committee lists a broad general education for all students as the first characteristic of the curriculum. It also would offer appropriate types of pre-professional curriculums and would utilize surveys of the local community situations as it provided specialized curriculums in technical and vocational fields, assuming that such training would lead to employment for students after one or two years of college education. Some of the latter could be cooperative work-study programs in which students would alternate between studies and work.

In its recommendation as to the location of several new junior colleges that the committee hopes Chicago will build in the next few years, the committee advocated the "proximity principle." The home and the place of work of the student, as well as the location of the junior college, should be thought of as constituting a triangle. The smaller the triangle, the greater is the possibility that some people attend junior college.

Appropriately, the committee urges citizens to appreciate that because the junior college is controlled by local authority it is able to relate its program directly to the community of which it is a part. Consequently, it serves its immediate environment not only through its community centered curriculum but also through the participation of its faculty in community affairs and in the advantages that proximity offers for the junior college to cooperate with business, industry and public agencies in providing employees with upgrading training programs.

Not the least of important points in its sales talk was the emphasis upon the junior college as an institution for adult education. The atmosphere of the junior college, the nature of its facilities, its staff, and its libraries are such that adults are eager to take its courses, to learn new concepts, skills and technics.

Entitled "The Chicago City Junior College," the report to the board of education by this special study committee constitutes a timely and challenging argument for similar study of the potentialities of the junior college for the larger high school attendance areas of the nation.

The Editor

Integration gains in schools
of the borderline states, but the
Deep South intensifies its

PATTERNS OF RESISTANCE

GLEN ROBINSON

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MOST observers agree that resistance to racial integration in public schools is increasing in the Deep South and is spreading to the Mid-South. The question frequently is asked: "How is the South able to evade the

intent of the Supreme Court decision—what methods are being used?"

Fifteen months have passed since the Supreme Court ruled that racially segregated public school systems should move toward desegregation "with all

deliberate speed." Some persons say that desegregation is moving at a snail's pace; others say it is moving too rapidly; still others say it is moving about as fast as could be expected. The way people evaluate the speed with which desegregation is proceeding seems to depend upon their point of view regarding the merits of the court's decision.

A survey conducted by *Southern School News*—an objective, fact-finding paper financed in part by the Fund for the Advancement of Education—indicates that some 300,000 Negro pupils, about 11 per cent of those in the South, are expected to attend school in "integrated situations" this fall. The term "integrated situations" simply means that some white and Negro pupils either attend one or more mixed schools in the district or are officially eligible to do so. The vast majority of these Negro pupils will be enrolled in the school systems of the border states of Delaware, Maryland, West Virginia, Kentucky, Missouri, Oklahoma, Texas and the District of Columbia.

On the other hand, more than 89 per cent (approximately 2.5 million) of the Negroes in a 17 state area will return to "segregated situations" as they enter school this fall. Except for three small districts in Arkansas and the "Atomic City," Oak Ridge, Tenn., the walls of racial segregation are still unbreached in the public schools of the Mid-South states of Arkansas, Tennessee, North Carolina, Virginia and Florida (a state with



Norfolk Journal and Guide

Hurrah! We can use this one!

Mid-South sociological characteristics). In the Deep South—South Carolina, Georgia, Alabama, Mississippi and Louisiana—segregation in the public schools stands firm. In other words, biracial public education crumbles at the South's edges, while resistance to desegregation hardens at its core.

As resistance has hardened, numerous approaches, techniques and methods designed to retain racial segregation in public schools have emerged. Although the specifics of these approaches vary with the attitudes of people and with the circumstances of various states and school districts, the approaches fall into what might be termed "patterns of resistance" to the Supreme Court decision.

1. Legal Side-Stepping

Southern legislatures have enacted about 75 statutes designed to preserve segregation since 1952. About 50 of these were enacted during the past year. These laws fall into the following general categories:

Pupil assignment laws. Alabama, Florida and North Carolina have enacted laws that omit all mention of race as a factor in assigning pupils to a particular school. North Carolina lists as factors to be considered: "orderly and efficient" administration of the schools; "effective instruction" of pupils, and their "health, safety and general welfare." Although North Carolina gives the "complete authority" for assignment of pupils to the local board of education, appeal of assignment is permitted in state courts. Florida makes the decision of local boards "complete and final."

Many segregationists think that the North Carolina type of law will be effective in "controlling" integration, since they believe assignment appeals in the state courts would be heard as individual suits rather than as class suits (applying to Negroes as a group). A state court has already ruled to this effect.

Tuition-transfer laws. In March 1956 a constitutional convention approved an amendment to the Virginia state constitution authorizing a tuition-transfer plan for pupils to attend private schools at public expense. In the event that school districts are forced to desegregate, this amendment would permit parents who object to integration to send their children to segregated private nonsectarian schools with tuition aid from public funds.

Interest in this plan is increasing in other states. This fall North Carolina is expected to consider action on a tuition-transfer plan that has been recommended by a legislative committee.

Freedom of choice. Recently Alabama has taken steps to enact a series of constitutional amendments and enabling bills that would authorize a "freedom of choice" plan. In essence, this plan calls for a three-track school system: one school system for whites, one school system for Negroes, and one racially integrated school system. Under the plan children of both races would be given "freedom of choice" as to which of the three school systems they attend. Proponents believe that the one integrated school system would meet the letter of the Supreme Court's ruling.

Provisions for closing public schools. The legislation passed by the general assembly of Georgia in the spring of 1956 illustrates some of the provisions embodied in "private school bills." The legislation includes: (1) provisions permitting the governor to close schools ineligible for state funds (because of mixed classes), to provide for preservation of such property, and to make state grants to individuals in such closed schools for purposes of education; (2) provisions authorizing local school boards to lease property for private school purposes; (3) provisions allowing for subleasing of such property; (4) provisions to include teachers in private, nonsectarian schools under the teacher retirement act; (5) provisions for inspection of private schools by the state fire marshal.

A constitutional amendment in Mississippi, adopted in December 1954, provides that a county or separate school district may be empowered to *abolish* its public schools by majority vote of both houses of the legislature. In 1952 South Carolina repealed its constitutional provision that required the state to provide public schools. The 1955 legislature gave local school trustees the "exclusive authority to operate or not operate any public schools."

Prohibiting suits against school authorities. One of the most recent legal devices aimed at blocking desegregation is the Louisiana statute designed to prohibit suits against any school governing body without the expressed consent of the state legisla-

ture. Virginia is reported to be considering the possibilities of such a law.

Repeal of compulsory attendance laws. Louisiana, Mississippi and South Carolina have taken steps to repeal their compulsory school attendance laws. In repealing its laws, South Carolina made provisions for a system of "visiting" teachers in lieu of "attendance" teachers. Although such laws are usually repealed as a part of "package" legislation to provide for the abolition of public schools, some persons believe that repeal of compulsory attendance laws would help school officials "control" integration, especially in rural districts where the Negro drop-out rate is already high.

Exercise of police power. A Louisiana statute passed in 1954 made the operation of separate schools for the races an exercise of the police power of the state to "promote and protect public health, morals, better education, and the peace and good order of the state, and not because of race." At the time the Louisiana provision was passed, many segregationists believed that it held promise of effectively circumventing the Supreme Court's decision. Within 15 months, however, the law was invalidated by the federal courts.

2. Moving Target

Many statutory measures passed by state legislatures in the South seem to be part of an over-all delaying action. The Louisiana legislature, for example, appears to be using a sort of moving target approach in resisting desegregation. Shortly after the 1954 ruling of the Supreme Court, the legislature passed a law, the one just described, requiring segregated schools as an exercise of the state's police power. These provisions became the legal target for integration suits brought by Negroes.

In February 1956 Federal Judge J. Skelly Wright of New Orleans declared the provisions invalid and ordered the integration of Orleans Parish (county) public schools "with all deliberate speed."

The legislature countered in May by shifting the legal target. This time two new measures designed to prevent integration were adopted: One prohibited suits against school governing bodies without expressed consent of the legislature, and the other suspended compulsory attendance in schools ordered to desegregate.



"In Dixie Land they'll take their stand."



Ah sho' hopes he approves mah dress.

3. Do Nothing; Wait to See

The school superintendent of a rural county in west Tennessee said recently, "People in our county do not seem to pay much attention to the Supreme Court's decision. We have no Citizens Councils or N.A.A.C.P. activities. The Negroes seem to be satisfied with the schools they have. Integration is just not a problem in our county."

In the same county, the principal of the high school for Negroes stated in a private interview: "The Negro schools are on par with the white schools in our county, and I have not heard anyone even mention wanting to go to a white school. The students in my school do not seem much aware of the Supreme Court's decision. It just doesn't seem to concern them, and it seems to concern their parents even less."

This do-nothing, pretend-it-never-happened attitude is a condition that results in continued segregation in many school districts, especially in the Mid-South states of Arkansas, Tennessee and Florida.

4. Protracted Study

The school boards of Asheville and Charlotte, N.C., in 1955 passed resolutions expressing the desire to comply with the Supreme Court's decision and appointed committees to study the problems of implementing the resolu-

tions. A number of persons criticized this action. In defending the action, Gov. Luther Hodges stated: "Such resolutions may, without any further immediate action, weigh heavily in future court actions in which the issue will be what constitutes a prompt start toward compliance."

Following the Supreme Court's implementing decision, the feeling was widespread in parts of the South that announcements of "study" activities would forestall court orders to integrate schools. In some cases school boards have "studied" the problems involved in desegregating schools, and in other cases special study groups have been set up at either the local or the state level.

Although it is difficult to determine the true intentions of school boards or study groups, most observers agree that protracted or extended "study" is being used in some districts to delay desegregation.

5. Official Vigilance

South Carolina and Mississippi have established state committees for the expressed purpose of maintaining racial segregation. In Mississippi, the legislature has created the State Sovereignty Commission of 12 members, headed by the governor, to serve as what has been termed the state's "watchdog" against desegregation efforts. The commission is authorized "to do and perform any and all acts

and things deemed necessary and proper to protect the sovereignty of the state of Mississippi and her sister states from encroachment thereon by the federal government." The commission is empowered to subpoena witnesses, books, records, papers or documents as evidence and to use the courts to enforce obedience to any processes. Failure to comply is punishable by a fine of from \$100 to \$1000 and/or six months in the county jail.

An "investigation division" serves as what Gov. James P. Coleman called the "eyes and ears" of the commission. Several Mississippi newspapers have criticized the commission for employing "secret agents."

6. Local Option

The attitude of the state administration in Arkansas has been that any school district can desegregate if it wishes but that no school district should be forced to desegregate unless it so desires. As a result three school districts—Charleston, Fayetteville and Hoxie—were among the first in the South to desegregate. However, there is strong resistance to desegregation in much of Arkansas.

Although local option permits voluntary integration, some persons in the Mid-South feel that by making desegregation a matter of local responsibility a state can increase the amount of litigation required to force compliance with the court's decision.

These persons believe that if desegregation is a matter of local option a court ruling to desegregate one district will not apply to other districts in a state.

7. State Pre-Emption of District Action

In the Deep South, most legislators feel that the perpetuation of segregation is too grave a matter to be entrusted to local school districts; consequently, the guardianship of segregation is considered a state responsibility. The legislature stakes out the pattern of resistance for the state and enacts laws designed to maintain segregation. These laws either pre-empt or restrict actions of local school boards.

This approach seems to spring from the feeling that a solid front must be held in the battle against integration or the cause will be lost. The depth of such feelings is reflected in a law passed by the general assembly of Georgia in 1955 making it "a felony punishable by two years' imprisonment for any state, county, city or school official to allow any state or

local funds to be used in a mixed school or to pay any teacher instructing a mixed class."

8. Shifting of Responsibility

The term "to and fro" might describe the course of events in North Carolina's resistance to desegregation. Shortly after the original Supreme Court decision the general assembly set up the advisory committee on education. This committee recommended in 1954 that local advisory groups be appointed to consult with school boards. This was done in many school districts with the general feeling that desegregation was a matter of local option.

Apparently prompted by fears in the eastern part of the state (where the ratio of Negro population is rather high) that school districts in the western part with few Negroes might begin desegregating, the committee dispatched a "confidential" letter to superintendents reversing its previous recommendations. The letter "suggested" that superintendents call a halt for the time being to further

activities by local study groups. The purpose of the letter was apparently to suspend activities at the local level until a coordinated approach to preventing racial integration could be developed at the state level.

This to and fro of responsibility for compliance with the court's decision between the state and the local school districts seems to result more from the inability of state legislators and state administrators to agree upon long-range policy than it does from an agreement that this approach is an effective means of evading the court's decision.

9. Reinterpreting the Constitution

The legislatures of the five Deep South states plus Virginia have disagreed with the Supreme Court's interpretation of the Constitution and have set forth their own interpretation in "resolutions of interposition." The Mississippi resolution declares the "decisions and order of the Supreme Court of the United States of May 17, 1954, and May 31, 1955, to be a usurpation of power reserved to the several states and do declare, as a matter of right, that said decisions are in violation of the constitutions of the United States and the state of Mississippi, and, therefore, are considered unconstitutional, invalid and of no lawful effect within the confines of the state of Mississippi."

These documents assert that a question of contested power has arisen between the federal government and the separate states as a result of the Supreme Court's actions pertaining to desegregation. They further assert that the court cannot resolve this question of contested powers. The Georgia resolution contends that "The Supreme Court is not a party to the compact [U.S. Constitution] but a creature of the compact, and the question of contested power should not be settled by the creature seeking to usurp the power, but by the parties to the compact who are the people of the respective states."

The general assembly of Virginia resolved that the question of contested powers could only "be settled by clear constitutional amendment" and that until the question is settled "we pledge our firm intention to take all appropriate measures honorably, legally and constitutionally available to us, to resist this illegal encroachment upon our sovereign powers."

The resolutions passed by the Ala-



Greensboro Daily News, Greensboro, N.C.

Spotlight



Juntas in the Minneapolis Star

Difficulty in keeping a cool head



The Commercial Appeal, Memphis, Tenn.

Now merely a question of how to handle it

bama and Georgia legislatures declare that the decisions and orders of the Supreme Court relating to separation of races in the public schools are "null, void and of no effect."

10. Official Action Against Local Agencies

In some states official action has been taken against local school agencies or individuals in an effort to hold the line on segregation. When the school board of Arlington County, Virginia, announced plans to desegregate, the announcement created a bitter controversy in the general assembly that resulted in the passage of a bill taking away Arlington's power to elect its school board by popular vote.

The Georgia State Board of Regents stripped Guy H. Wells of his honorary title of president emeritus of Georgia State College for Women because of his alleged desegregation statements. On the same day, the board of regents asked the teacher retirement board to discontinue his monthly retirement payments, if that were legally possible. The trustees of the state retirement system rejected the request as unconstitutional.

Several Deep South states have taken action directed against either the National Association for the Advancement of Colored People as an organ-

ization or against its members as individuals. Louisiana has invoked a 32 year old, anti-Ku-Klux Klan law against the N.A.A.C.P. as an organization. South Carolina has a law forbidding the employment of N.A.A.C.P. members by state, county or municipal governments. Alabama has enjoined the N.A.A.C.P. from activities in the state.

11. Attacking the Supreme Court

Several nationally known southerners, such as former U.S. Supreme Court Justice James F. Byrnes and Sen. Strom Thurman of South Carolina, are apparently attempting to link their fight against the desegregation ruling of the Supreme Court with controversial court rulings affecting other areas of the nation. Race problems are not major factors in their attacks. They are calling for *all* persons interested in "constitutional government" to help "limit the power of the federal appellate courts." If they should succeed in forging a link between southern and non-southern forces attacking the Supreme Court, this pattern of resistance could conceivably take on a national dimension.

* * *

Some Southerners resist the Supreme Court decision because they are

staunchly opposed to any mixing of the races in public schools; they say flatly, "Integration will never happen here." However, many Southerners who are actively supporting patterns of resistance to the Supreme Court decision admit their belief that desegregation will eventually blanket the South. Even Georgia's attorney general, Eugene Cook, is reported to have stated to a meeting of lawyers in Atlanta that most of the segregation laws "will be stricken down in due course."

Although many Southerners believe that desegregation is inevitable, they resist the Supreme Court decision for several reasons. Some of them resent being forced to change their basic institutions. Others hope for a fortuitous event that might greatly prolong segregation. Some feel that basic constitutional principles are involved. Others feel that more time is needed to reduce socio-economic and educational differences between white and Negro children. Others feel that more time is needed for both races to adjust to such a major social change. And some persons want to prolong desegregation in much the same way that one puts off going to the dentist.

NEXT MONTH: *Patterns of Compliance With Integration Rulings.*

Better Ways of Teaching Spelling

Modern practice recognizes
individual differences; develops critical
attitude and purposeful application

An interview with RUBY M. SCHUYLER

Director of Curriculum, Public Schools, Glencoe, Ill.

Is the teaching of spelling more difficult for English than for most languages?

Yes. There is little relation between the sounds of English letters and the written form. Most languages have only one sound for each letter. For example, an Italian child is conditioned to writing certain letters to represent certain sounds, while an American child must learn many different sounds for the same letter. Dr. Hildreth in her book on spelling says there are 14 different ways of expressing in writing in English the sound of long "o" as in toe, floor, yeoman, sow, sew and beau.

The number of silent letters in the English language also causes difficulty. It is estimated that out of 600,000 words in Webster's unabridged dictionary more than 400,000 words con-

tain at least one silent letter and may have more than one.

The wide range of English vocabulary is another source of trouble; 25 per cent of the words commonly used are derivatives or variants.

The non-phonetic character of some of our commonest words, such as were, busy and through, makes for difficulty. However, about 85 per cent of English words contain *phonetic elements*; the highest consistency is in the pronunciation of single consonants.

What do tests show as to how well children are learning to spell compared with children 20 to 30 years ago?

Some tests have been given to provide data on this question. Results have been somewhat difficult to evaluate because of great differences be-

tween the tests of 30 years ago and modern tests.

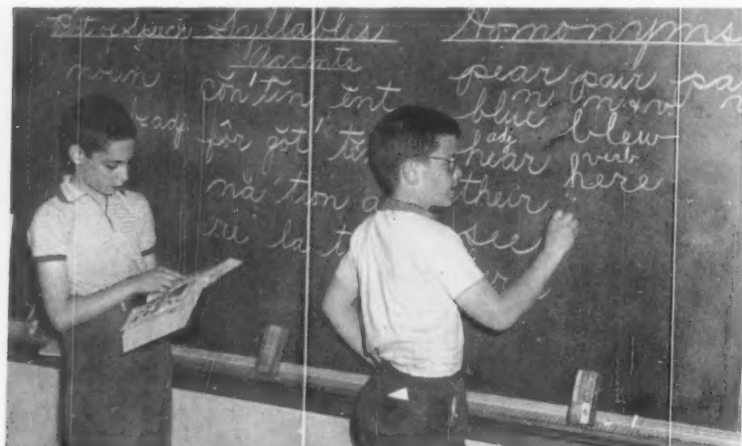
The words that were included in tests of 25 to 30 years ago were difficult—the majority about seventh and eighth grade level. Spelling was taught then as a rote memory exercise; today it is the use of spelling that counts, so words in today's lists are words we use.

Tests were given in several cities—among them Evanston, Ill., and Dearborn, Mich. The same tests that were given to pupils in about 1926 were given to pupils in today's schools. The results in each case showed a gain of from six months to a year or more in the areas of reading, language and arithmetic. The pupils of today did not do so well in spelling. This has been explained as being due to the presence of more difficult and less functional words in the tests and to differences in the objectives of teaching spelling then and now.

What changes have taken place in our method of teaching spelling in the last 20 or 30 years?

Thirty years ago spelling was taught as a formal subject entirely isolated from the rest of the curriculum. The emphasis was upon pronunciation and rote spelling. Pupils were taught to spell many words they did not understand or use. In the Twenties the need for spelling as a tool for writing was recognized and also that written language is a means of communication. It was found that as they learned to spell lists of many isolated words pupils became frustrated because they didn't know how to spell the words they needed for their written work.

As part of their study of spelling, sixth graders work on homonyms and syllabication. They use a dictionary to check diacritical marks and accents.



These eighth graders are busily engaged in proofreading compositions written for a social studies class in Glencoe, Ill. One girl had made a chart; she is correcting a misspelled word.



Spelling is now being taught as a language related skill. The objective is to develop spelling power. Spelling is learned and practiced as a functional tool.

Today we recognize that pupils vary greatly in their ability to spell. Individual differences are planned for through grouping within the classroom according to needs.

What is the prevailing method of teaching today?

Today the school tries to develop a spelling conscience, a desire to spell correctly, a critical, inquiring attitude toward one's own spelling, the habit of using a dictionary and of proofreading one's own work. The teacher's attitude can be a factor conducive to good spelling. The teacher should recognize the need for correct spelling in every content area. Through the teacher's work and enthusiasm, children can be inspired to more purposeful application.

Spelling should be an aid to self-expression; the fear of misspelling should not be a barrier to written expression. The final criterion must be how well the pupil uses his spelling in all written work every day.

Children are taught to understand the structure of words, derivation of words, root and stem words. They need to know and understand the use of suffixes, prefixes, homonyms and synonyms. Phonetic analysis is also an important part of spelling instruction—the recognition of phonetic elements and syllables. The use of the dictionary cannot be minimized, and systematic study of such procedure should be part of spelling instruction. Only

a few stable rules are taught—through generalization—and these should have very few exceptions.

Standardized spelling lists and spelling books are used as guides to correct spelling. Teachers continuously check against such lists to be sure they are teaching the fundamental words all children must know and use. The most important source, however, will be the list of words the teachers obtain from the children's own writing—the words they need to use in written expression.

The method used in attacking each lesson may vary somewhat. The one that seems to be the most functional and most widely used is known as the test-study-test method and contains the following steps:

1. Pronunciation and meaning of the new list of words for the week.
2. Pretest on these words. Those children who spell the words correctly are excused from further study. The remainder of the group will study the words misspelled by writing words in blanks in sentences, writing words in a story, and practicing phonetic and structural analysis.
3. Final test at the end of the week.

This method is an economy of time as it avoids having pupils who already know the words spend time studying them.

How does this method differ from other practices or methods of teaching spelling?

The foregoing method of teaching spelling is in contrast to other methods less functional such as:

Drill on isolated lists of words without emphasis on meaning and use.

Study-test-study method with every child studying all the words even though he may already know them—this indicates little attention to individual needs.

Learning many complicated rules that only serve to confuse pupils.

No attempt to integrate spelling with all language activities and every subject area.

What are the principal obstacles or difficulties of public schools today in the teaching of spelling?

Children today must learn to spell a tremendous number of words. Modern living has increased the number used by adults. Such words as penicillin, atomic fission, and plastics are comparatively new to adult vocabularies. Children need to learn them as they study social studies, science, mathematics, language and reading. Ruth Strickland says, "Learning to spell the words we need is a never ending task."

The rapid pace of modern living results in careless speech. Many errors in spelling are due to poor pronunciation and enunciation. Children are likely to spell a word as they habitually hear it and say it.

Lack of importance that adults (parents, teachers and others) may attach to spelling and the poor examples they sometimes set in their writing may play a part in forming the attitudes of the children.

Purposely misspelled words in commercial advertising, in titles and slogans on signboards, or on TV are confusing to children.

Two languages spoken in the home (when parents are of foreign birth) often make for incorrect pronunciation.

A lack of consistency and continuity in the spelling program makes for difficulty. The school needs to have a well planned developmental program that provides for many opportunities to spell and that teaches good spelling habits such as use of a dictionary and careful proofreading.

Have new instructive materials, especially audio-visual aids, been developed in recent years that will be helpful in teaching spelling?

Some filmstrips are quite helpful. The materials used with the tachistoscope are another source of visual aid. These materials heighten interest and focus attention to the extent that visual imagery is increased. There are some records introducing phonics that may have some value if they are used correctly. All of these materials should be carefully evaluated and cautiously used or they will become only artificial stimuli rather than aids to developing spelling competency.

How can we encourage use of a dictionary?

It is much easier for parents or teachers to spell a word for a child than to encourage him to use a dictionary. Consistent suggestion for dictionary use is the answer.

However, before pupils can use a dictionary effectively definite instruction must be part of the program. We can never take for granted that a pupil knows this skill. We must give him effective technics that will ensure competency in this area.

Is there such a thing as spelling readiness, the same as reading readiness? If so, how is spelling readiness described and discovered?

Betts, Gray and Dolch, in fact, all authorities in this field, emphasize that readiness is an important factor in learning to spell and that a stock of sight words is necessary for such readiness. Fitzgerald says the child's readiness cannot be taken for granted—there must be evidence of such readiness as his mental alertness, his consciousness of the need for spelling, and his desire to learn to spell. Readiness includes physiological aspects such as attention span and visual maturity.

An optimum mental age for readiness to read is about 6½ years, while for readiness to spell it is 7½ years. Auditory and visual handicaps should be discovered early—training in audi-

tory and visual discrimination should be started in the preschool period and continued in kindergarten to help create readiness for reading and spelling.

Language used in the home affects pronunciation and speech patterns. Good speech habits and an adequate speaking vocabulary are important.

Children develop at different rates in all these readiness areas. Individual differences must be considered as we begin the teaching of spelling.

What has happened to our pride as spellers? How can we foster the old spelling bee pride?

The old spelling bee was really a social affair in the past. The spelling bee, square dance, and box social were great events in the life of early rural America. Horace Mann questioned the spelling bee as "mechanical glibness." Although the social aspect of the spelling bee passed, it was still held as something to work toward. It was a great honor to be chosen as a participant in a spelling bee. The past few years this activity has been revived. It has been promoted in some cases by newspapers.

There is great doubt how much this does for most pupils. The excellent speller who already spells well is chosen to compete with others who are tops in the field. These pupils may gain something in spelling skill, but the pupil who is having difficulty is only more discouraged by never being selected for this skill. Some informal "speldowns" are used as practice exercises in classrooms. The pupils find it somewhat of a game and have a real interest in seeing how well each one can spell. Effort is made to keep the wrong kind of competition to the minimum. However, the spelling bee should be used only as a change of practice procedures. It is a rather negative approach and still gives greater opportunity to the good speller and little help to the poor one.

What about remedial courses in spelling on the high school level?

There is little instruction given in spelling in high school. Errors are pointed out in English classes, but there is little actual help given to improve spelling.

There is no doubt that such instruction is needed. High school students should be given help in pronunciation, working on "spelling demons," use of a dictionary, word study (structural

and phonetic analysis), and proofreading. We need to accept the responsibility to help those pupils who wish to improve their spelling.

Do business firms have legitimate cause to criticize schools for their graduates' lack of competency in spelling?

There is a special vocabulary that must be learned in any business. No school can prepare pupils to spell correctly all such business terms through practice in school. Schools can, however, give pupils an effective method that will develop spelling power. This can be done through developing independence in word attack, facility in using the dictionary, and a habit of careful proofreading.

What can parents do to help children with their spelling lessons?

The more parents can help children to become aware of the need for learning to spell correctly, the greater will be the children's interest in improvement. Parents as well as teachers need to be interested in children's learning correct spelling.

The family can spell for fun, noticing signs while traveling, and play spelling games (there are many instructive spelling games now on the market).

When children ask for help in spelling while doing homework, parents need to suggest using the dictionary. They should encourage children to write letters and to become sensitive to the need for accuracy in communicating with others.

What are some good reading references today on spelling, both for the teacher and for the parent?

The following are some of the most recent books and articles that have interesting facts about spelling and practical suggestions for the teaching of spelling:

"The Modern Teaching of Spelling" by Edward R. Dolch (1950).

"The Teaching of Spelling" by James Fitzgerald (1951).

"The Art of Spelling" by Ernest Horn (written for parents). This is a chapter in Volume 14 of "Childcraft" (1954).

"Teaching Spelling" by Gertrude Hildreth (1955).

The January 1956 number of *Education* is entirely devoted to spelling and contains articles by well known authorities in this field. #

No, not a national course of study, but—

The Schools of Our Nation Need Some Curricular Experiences in Common

***This is the view of the new executive secretary
of the A.A.S.A. He wants to see our national unity
strengthened, yet he would keep local curriculums
flexible enough to care for every individual student***

FINIS E. ENGLEMAN

*Executive Secretary, American Association of School Administrators, Washington, D.C.
Until Recently Commissioner of Education for Connecticut*

THE concept that each school district, and in fact each teacher independently, can be trusted wisely to determine all aspects of the instructional needs to be challenged.

I am fully aware of the historical concept in America that education is a state responsibility, and further that the educational program is a local responsibility with limited guidance to be given by the state. Along with this concept has prevailed the belief in the undesirability of any curricular program that has its origin from the outside.

When this local autonomy was established, local communities were in fact self-contained and were largely independent and unrelated to forces outside the neighborhood.

I know, too, of the philosophy that has prevailed to a considerable extent in the United States to the end that the teacher is the curriculum. For many years my concept of a sound curriculum for our public schools rested on the belief that the basic experiences must be determined by the individual teacher on the job and in the light of his knowledge of the

world and of the individual child's needs in his class at the time.

I continue to believe that there must be such flexibility in any planned educational program as to permit great diversity relative to the scope of experiences and standards of excellence which may be required in most curriculum areas, and I continue to believe that the teacher's responsibilities in freedom of choice of subject matter still loom large. Furthermore, I believe that no nationally dictated formal curriculum pattern is desirable or necessary.

But the automobile traveler does not make his road maps as he goes. The carefully marked roadway system, with many geographical notations, serves as his basic guide. He must, however, make many decisions and exercise judgment at every turn. The maps do not destroy his ability to take side trips, visit historic spots, or vary his cuisine, but they do keep him from getting lost. Similarly, a flexible curriculum could be used by the teacher. What the individual teacher or independent school board sets forth as a curriculum program needs to be

supplemented by a broader look than is possible or even desirable when the program is left to the sole determination of the individual teacher or school board.

In my lifetime great changes have been brought about relative to the needs of society and the environment in which man lives and makes his living. Education, like economics and politics, is no longer a neighborhood affair. Our nation, and in fact all free men, faces a challenge to survive in a world in revolution. Unless education is effective in promoting some common understandings, some common values, and some common competencies among our people, the strength of the nation will be weakened. These competencies to me mean not only skills but value concepts, insights, understandings, appreciations and the power to decide and act.

With the coming of age, the American people need these qualities, not for the local environment alone but for the national scene as well. *A provincial concern must be supplemented by a national concern.* Furthermore, when we consider the scope of

the educational process and the diversity which exists in the qualifications of the individual teachers of the land, it becomes more than ever clear that the teacher himself must not be expected to assume the full responsibility. Surely the wisest leadership in the profession, supported by stalwart laymen, should provide some suggestions relative to the education which is of most worth. Surely, too, it must be clear that this cannot be left entirely to the whims, fancy and parochial vision of a local community.

It is no reflection on the teacher to indicate the need for over-all curriculum planning. Surely he cannot be expected to view in perspective every significant development that has implications for education, from significant research in nuclear physics to new foreign policies. Is it not reasonable to conclude that some help might be given the teacher in selecting that educational content which is the heritage of man? There are priority decisions relative to our culture on which individual teachers need help.

Let me go a little further with my thinking on this point. Why should you or I be concerned about a statement of our *national* educational goals, and even more about the development of broad guideposts for the skeletal arrangement of the curriculum organization for our public schools?

The Need for a Wider Horizon. The relatedness, the interdependence, the very smallness of the modern United States of America are the first reason that our vision must go beyond that of the individual teacher or school district. There is need for a wider horizon. We simply do not have the

same world that we had when our public schools began, or even when I began teaching. Young people today should not be expected to exist in isolation, or in an environment as narrowly limited as it was a few years ago. Today the needed foundation abilities of the American for the discharge of his obligations as a citizen do not differ much, regardless of where the citizen lives or where he makes his living.

We are in a complex world, and the duties of the citizen likewise are complex. Surely, it is clear to everyone that the man who makes decisions as a voter in Michigan needs about the same competencies as the voter who goes to the polls in Louisiana or Connecticut. All citizens are asked to make decisions on such topics as N.A.T.O., UNESCO, the Bricker Amendment, and the like. Also, many of the skills, understandings and knowledges useful to the productive worker are essentially the same whether he is a machinist, an electrician, or a teacher.

Thus it seems quite clear that, as far as man's personal strengths are concerned, there are some common denominators both as to the discharge of the citizenship rôle and as to the diversified vocations. No other nation has so many cultural patterns or such diversified values, all good, up to a point. In the midst of this diversity, however, there is serious need of common bonds of unity. Some common values, some common understandings, and some common qualities must bind our people together in these times when factions from within and enemies from without would tear our nation asunder. In my opinion, competencies are arrived at to a considerable degree

by virtue of an educational program. Curriculums should be designed, therefore, to develop competencies required by society. No neglect of or lack of concern for the individual is implied in a deepened concern for the needs of all citizens of our democratic society.

A Threat to National Security.

Another aspect of this contemporary scene which seems to cause us to have broad national concern for an educational program with recognized priorities is the rôle in which our nation finds itself today. The international scene forces on our nation competition in the fields of diplomacy, technology, economics, government and military defense of the most pressing kind. We have limited manpower as compared with many other nations. Our national resources, too, have their limits. Unless we set some priorities in terms of educational goals on the national level, there may be a threat to national security itself. We must, I believe, neglect no resource in developing to the maximum our manpower resources. The growing plight of our nation suggests not only the necessity of developing strength through trained manpower but also the need to identify some common educational outcomes for all citizens and the need for special competencies in some areas vital to national security. Thus there should be provided suggested educational objectives which would be values for all children and youth as well as areas of competencies which meet specialized societal and individual needs.

The world's accumulation of knowledge, too, has been accelerated at an amazing rate in recent years. During the same period modern man has become involved in the world scene with all its complexities. These two facts suggest the necessity of careful priorities in the school curriculum if America is to maintain leadership. Without an improved and changed educational program, men of free choice may through ineptness destroy the validity of this great principle of life. No quicker way could be found to destroy this nation than to fail to train its citizens for power in decision making. Indeed, it is a necessary common quality.

It is frightening to know the great range of professional standards tolerated by our certification regulations. In one state we may find teachers teaching with little more than a high

No teachers, even in a state where the highest qualifications are required, can appraise national needs. Surely broad curriculum guides, technical suggestions, and achievement profiles would help even the best teachers and would be a lifesaver to weaker ones.

school education, while in others a minimum of five years of college work is demanded. It is juvenile to assume that a teacher even in a state where the highest qualifications are required can appraise national needs. If schools seek to develop citizens with competencies that serve both the individual and the society of which he is a part, surely broad curriculum guides, technical suggestions, and achievement profiles will be of some assistance to the best teachers and will be a lifesaver to the weaker ones. With such suggestions before the profession, there would continue to be the necessity for local initiative, local adaptation, and local deviation. In fact, each local school system, each teacher, may be left free to reject the whole of it. There is no legal framework in the United States that would permit compulsory imposition of any nationally conceived curriculum nor should there be.

Another Argument for Commonality. The mobility of our present population is another aspect of our contemporary scene that seems to argue for some degree of commonality in our curriculum patterns. It is estimated by the Census Bureau that one family out of every three in the United States will move during this year. If this is true, then, in all fairness to the individual who attends school, efforts should be made to provide some sequence and relatedness between the educational program in one school system and another, and between the total program in one state and another. All this need not in any way serve as a strait jacket. This does not suggest any official formalized national course of study to be demanded of all. It is merely an attempt to have a framework of values, a program of curriculum areas, and a broad skeletal profile of educational experiences best designed to achieve known objectives.

A recent research study shows clearly that children who transfer from one school to another have a much higher failure rate than children who continue in one school, even though their mental ability is comparable. Lack of curriculum sequence, widely varying standards, and lack of common curriculum elements are likely causes for many of these failures.

Finally, I might add that conditions have developed that seem to be bringing a common core of educational experiences into the picture any-



U.S. delegates to the 19th International Conference on Public Education at Geneva, Switzerland, July 9 to 17, were (seated): Dr. Engleman; Fredericka M. Tandler, international organization specialist, division of international education, U.S. Office of Education; (standing): Kenneth E. Brown, specialist for mathematics, division of state and local school systems, U.S.O.E., and Gerald B. Leighbody, associate superintendent, Buffalo, N.Y.

way. There is indeed some similarity between the education in one district and that in another within states. This is being brought about by the wrong forces, or at least by forces that are not the best qualified or the most legally responsible for performing such a task. The common elements that can be found surely need more validation than is presently attempted.

Influence of Textbooks and Standardized Tests. What relatedness or sequence we find in the American educational program today, in large measure, comes from the men who write textbook series. They have assumed the responsibility not only for including content but for determining the sequence of content. Thus we see reading being taught in most first grades. We find arithmetic series that suggest that the multiplication table should be taught at a given age level. We find geography series which give the geography of South America during a certain grade level, and the like. Of course, these textbook writers

don't all get together; they do have disagreements, and the sequence of subject matter is determined by the choice that somebody makes of a textbook. When a youngster, therefore, moves from one community in Connecticut to another where they happen to have chosen different textbooks, he may either repeat a year's work in a given subject or skip it entirely, depending upon which districts his parents happen to move to and from.

Closely related to the textbook makers in terms of influence on what we teach are the standardized test makers and those who construct the college board examinations. For many school systems in the United States these people or the salesmen for their tests determine what is being taught and when. Their influence, of course, depends on the emphasis placed by the administration on the importance of standardized test results. Examinations should be devised in terms of instructional objectives. First the curriculum, then the test. Too often the reverse has been true. We have the

cart before the horse. Instead of establishing our goals and content objectives first, and then designing measuring instruments to evaluate how well we have taught, we have selected our tests which in turn have controlled the content.

Then, of course, we should not overlook the fact that special interest groups get programs introduced into the schools without a proper evaluation's being made by those officially and professionally best prepared to choose or a priority's being established. Where the A.A.A. is strong, there we find driver education. Where the W.C.T.U. dominates, there we find great emphasis on the harmful effects of alcohol. In a community or a state where the curriculum pattern rests on the philosophy that the teacher can make his choice, these pressures are usually strong enough to influence the individual teacher, and thus adequate weight is not given to all of the curriculum considerations that should be determining factors. Neither society's needs nor the individual's needs are given first priority under such conditions.

Clarification for All of Us. Surely society in general and professional leadership in particular have a rôle in sketching our national goals and the broad patterns of the total curriculum. The American teachers need, in my judgment, clearly established objectives and broad skeletal guides into which they put the details. The competencies we seek through education need clarification for all, especially the teacher. Since our nation needs not only diversity among its people but a certain amount of unity as well, it seems sound to me that the nation's goals and the nation's needs should be identified more carefully so that some educational common denominators will be prevalent in every curriculum in every school district. Room, of course, must be left for those special aspects of education which meet the peculiar needs of the individual person and the individual community. And standards of excellence should suit the learning ability of the individual.

Any curriculum maker who does not give full consideration to the rapidly changing world, any teacher who does not grasp the significance of what modern science has wrought, any program of education that is not designed to interpret the world, its people, and

their culture as of 1956, is pushing man toward obsolescence, with which he is ever threatened.

What Is Our National Profile?

Now I turn to the question of what is involved in this proposal. First, I believe that there should be an effort made to write an up-to-the-minute concise statement which identifies qualities and characteristics of the United States of America. What does our national profile look like? The fundamental values which our American society has been seeking and sometimes achieving should be listed. The basic destiny or purpose of the nation might well be described in fresh and invigorating language.

Second, a descriptive analysis of the characteristics of the modern physical and social world and of the nature of man and his diverse qualities should be carefully presented in simple and concise language. Not only clear description of man's modern environment should be provided but the latest knowledge of how man grows and learns, together with the great range of individual differences, should be outlined clearly.

Third, a statement or a restatement of the aims and objectives of education in American society should set forth our American dream of universal education. I don't believe this has ever been done by any broadly established educational agency at the national level. Of course, some of the founders of our free school system made some brilliant statements. In 1918 the cardinal principles of secondary education were outlined by a voluntary national committee, and the Educational Policies Commission has more recently helped identify our objectives. In my judgment, it is high time that this is done again, in a little different way, by authoritative and nationally recognized groups working together.

Fourth, a broad skeletal outline of the common curriculum experiences desirable for all children and youth, together with the areas where diversity of content is needed for the individual and for society, should be blocked out in flexible terms. The common learnings should be clearly identified with a likely range of quality and quantity of competencies established. Quality profile differentiations in likely achievement standards would give reality and concreteness to the learning expectancies.

The scope and quality of secondary school curriculums with area content delineated may well have some attention, too. Must we rest our case in secondary education with the textbooks or with the college board examinations or, for that matter, with the limited judgment of an overworked teacher?

Assuming that there is some justification for the production of such documents as I have just discussed, we must turn our attention to the ways and means for getting such a job done. It is my belief that the Council of Chief State School Officers should first of all spend some time weighing the advisability or inadvisability of having such materials produced. Certainly, we must beware of a formalized national course of study that would be inimical to the basic philosophy of the American people, or would so formalize and ossify our educational program as to make us inadequate for a changing world. Neither must we allow violence to be done to the individual differences in interests and abilities.

If, after study, there seems to be merit in such a project, the Council of Chief State School Officers should invite the consideration, the cooperation, and the joint sponsorship of such voluntary organizations as the Educational Policies Commission, the American Council on Education, the Association for Supervision and Curriculum Development, the National School Boards Association, Inc., and the National Congress of Parents and Teachers. Outstanding laymen and specialized scholars should be induced to serve as consultants.

Safeguards Can Be Adequate.

It would seem to me that all dangers should be carefully recognized, examined and averted by adequate safeguards. On the other hand, we must likewise beware of stopping progress simply because we think there are dangers in a given particular approach to promoting it. We must not make such fetish of local autonomy or of the value of diversity that we overlook the importance of the common cause.

Surely, there can be developed broad curriculum guideposts which will give proper weight to educational offerings, will be designed to strengthen our national unity, and yet will remain sufficiently flexible to care for the individual person in any classroom situation. #

NOW and then a school administration loses sight of the fact that school committee members are civic minded citizens from all walks of life and, as such, cannot be expected to understand the whole philosophy of modern school operation. Consequently the staff gets several jumps ahead of its policy making body. This inevitably leads to misunderstandings. We had this kind of experience with regard to the selection of textbooks a few months ago at Warwick, R.I.

At the annual budget conference of our school committee, suddenly and without warning, the administrators found themselves in a violent storm of protest. Our five school committee-men discovered to their amazement that our junior high schools were not requisitioning the same textbooks.

"What sort of business is this?" they demanded to know. They made it quite clear that, if there was any logical explanation for such a confused state of affairs, they would appreciate an explanation.

Now, as teachers and administrators in Warwick, we have felt legitimate pride in the productivity of our curriculum workshops. Cooperatively we have developed 18 teachers' guides and manuals that cover almost every area in the curriculum from Grade 1 through Grade 12. These guides contain in detail just what is to be taught in the several grades. Our school committee wasn't exactly in the dark about these guides. However, the administration apparently had slipped up in not informing the committee that considerable latitude is allowed our teachers in presenting the subject matter to their classes. Teachers differ as human beings, and children differ in intelligence, needs and experiences; therefore, teaching methods must differ.

PHILOSOPHY OUTLINED

As you can well imagine, we lost no time in trying to make our position clear to the school committee. A memorandum to the five committee-men was drafted. It described briefly our workshop method of preparing teaching guides, credited nearby colleges and universities for the help their faculty members had given us, and acknowledged the help in certain areas given by citizens, parents, recent school graduates, employers and labor. The committee was apprised of the fact that our 17 committees and workshops meet at regular intervals to dis-

cuss and evaluate these teaching guides in the light of classroom practice. It was mentioned that roughly 300 teachers are regularly involved in this evaluation process, during their after school hours. Then the philosophy of variety in uniformity was outlined in detail. To quote from the memorandum:

"We believe that it is not enough to set out for teachers what they should teach, grade by grade. They must, of necessity, be supplied with a list of textbooks, reference materials, and teaching aids if we are to expect them to do a good job. These lists are included in our guides. We do not consider it desirable to insist that each school use the same books and teaching materials. Teachers have been trained in a number of institutions, and, consequently, various teaching methods are employed in our schools. We do not discourage this variety; rather, we think it a healthy condition. Teachers tend to borrow from one another what they consider to be good practice. Teachers also have different personalities and drives. What is good method for one won't work with another.

"Certain students 'take' to the method and personality of one teacher while others do not. What appeals to some students in a teacher might not to others. . . . Because some parents feel that a teacher is poor is no reason to believe that she really is—when others feel that she is good.

"We hope that this rather involved explanation has succeeded in pointing out that the 'what' to be taught is set out in black and white to our teachers. The 'how' is left to them, of course with reasonable restrictions. We shall

be happy to be asked to go more into detailed explanations at any time—either privately or publicly.

"It might be added that several school systems and universities throughout the country, including the United States Office of Education, have written for copies of our manuals and guides. We have set up a price list to cover duplication, paper and mailing charges."

SITUATION NOT UNDERSTOOD

Copies of the memorandum were distributed to our secondary school principals at one of their regular meetings. They expressed the belief that the textbook situation which faces modern schools is not thoroughly understood by our adult citizenry. They are in agreement that "a search for the truth" can only be carried on by an inquiring and critical mind—the kind of mind that is so necessary for the preservation of our democratic way of living. This search can best be developed through a variety of books and sources from which students may form considered conclusions. Students are helped to arrive at these conclusions through organized small research groups whose findings are reported to the class in panel discussions.

Recently all five members of our school committee were contacted individually. Four of them said they now understand the reasons for multiple texts and reference materials and they will not insist on one and the same text for all grades in our several schools. The fifth member accepts the "idea" but wants "to be shown." We hope that as a visitor to our classrooms he is being convinced through actual observation. #

We Did Better Teaching Children Than Informing Board Members

CLARENCE S. TAYLOR

Assistant Superintendent of Schools, Warwick, R.I.



Older Teachers Aren't Necessarily Grumpy

HAROLD VAN WINKLE

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Bowling Green, Ohio



WHEN 28 parents in one school system say, "What our schools need most are younger teachers," you begin to wonder about the old-timers.

We got those comments when we asked 500 parents, who constituted a random sampling in a school system in Ohio, to tell us what they thought their schools needed most.

The results of this survey were far from unhappy, despite the fact that slightly more than 5 per cent said younger teachers were needed. When we asked those 500 parents what they liked most about their schools, well over 300 made favorable comments about their children's teachers. Those were free responses, too; parents didn't have to name "teachers" as being what they like most. They could have mentioned other aspects of their schools—and many did.

Still, that minority report was bothersome. When twice as many parents said what their schools needed most was more teachers as said younger teachers are needed most, that was easy to understand. But what's wrong with the older teacher? Does a teacher lose interest in his work, or lose touch with young folk, or become more grumpy as he grows older?

In the same study, 251 teachers in this school system filled out questionnaires about their work and the schools. Because a number of questions asked on this questionnaire could easily reflect attitude, we said to ourselves:

"Why not analyze the responses of these teachers to see what differences we can detect between younger and older teachers?" In other words, can we find any indication here that "grumpiness" is a characteristic of age?

We selected 45 of the 65 questions on the questionnaire for this purpose. Since the teachers had been asked to give their age (but not their names), it was easy to classify responses on this basis. And since each also indicated sex, we decided we would also compare responses between men and women teachers. So we tabulated responses in such manner that these five comparisons could be made:

1. Responses by men teachers under 30 with responses of those over 50.
2. Responses by men teachers under 30 and over 50 with responses of those between 30 and 50 years of age.
3. Responses by women teachers under 30 with responses of those over 50.
4. Responses by women teachers under 30 and over 50 with responses of those between 30 and 50 years of age.
5. Responses by men teachers with those by women teachers.

Now, as you perhaps know, percentages of positive answers are better for use in making comparisons like these than are the actual number of answers. So we took the percentages and used them in a formula which would show where significant differences in responses existed at what

statisticians call the 5 per cent level of confidence. Here is what we found:

Men teachers over 50 differed significantly with those under 30 years of age on only one question, and that concerned discipline. In the group being studied, younger men apparently refer more discipline problems to the principal for him to solve than do the older men teachers.

The middle-aged group of men teachers differed significantly from the outside-aged group (over 50 and under 30) on only two questions. The middle-aged group seems to rate the inservice training program in the school system more highly than do the older and younger men. The two groups also differed, strangely enough, on a factual question regarding whether teachers in

*Apparently little research has been made on this precise subject. Robert J. Havighurst and Ruth Albrecht in "Older People" (Longman's Green and Co., 1953, p. 53) state: "It might be expected that the 80 year old people would be less happy and well adjusted than 65 year olds. There is a very slight tendency in this direction, but it is remarkably slight."

Otto Pollak in "Social Adjustment in Old Age" (Social Science Research Council, 230 Park Ave., New York, Bull. 39, 1948, p. 62) declares: "There is general agreement among both laymen and students of old age that a number of traits indicating maladjustments are more frequently found among old people than among younger groups in the general population." Although one may agree that certain factors accompanying old age are frequently the cause of unhappiness, this is not the same as stating that old age per se is the cause of unhappiness.

their school system are paid a regular salary for school days when they are away to attend professional meetings.

With these age groups differing so little in their responses, we readily concluded that nothing in this study shows that men teachers tend to develop unfavorable attitudes as they grow older. That is to say, neither a more favorable nor a less favorable attitude characterizes a particular age group. Quite the contrary, the evidence seems to support other findings* that an unhappy attitude is more of a trait of personality than a characteristic of age. Apparently you will be just as happy, and as easy to work with, when you're old as when you're young—or just as grumpy.

CAN'T LINK AGE AND ATTITUDE

The same sort of conclusion was drawn about women teachers, too, although they differed significantly on more questions than did the men teachers. In fact, women teachers over 50 differed with those under 30 on eight of the 45 questions. A significantly larger percentage of older women believed that playground and gymnasium facilities are adequate for the present enrollment, that ample space is provided in the schools for the school health clinics, that open house should be held at least once a year, that the school system does encourage extensive use of community resources in teaching, that the schools do a good job in keeping parents informed about the work the schools are doing, and that teachers in their school, for the most part, take part in activities of local community organizations.

Women teachers under 30 were more willing to say that the maintenance program in their schools is adequate, that they would rate the appearance and cleanliness of their schools

above average, that lunchrooms are adequate, and that they have an adequate supply of visual aids.

Actually, such differences in response are not really too significant, statistics notwithstanding. In part, they reflect some lack of knowledge of the school system on the part of younger teachers; also younger teachers are less critical of their surroundings.

Another question on which the older and the younger women teachers differed is interesting. It reads: "Do you feel that the administration in this school system gives sufficient attention to teachers as 'persons,' i.e. teachers as social beings rather than as mere 'machines for skilled labor?'"

Of the women under 30 years of age, 76.4 per cent said Yes, but only 54 per cent of the women over 50 said Yes. One can hardly resist speculating a bit about this. Is the principal or superintendent at times more attentive to the young lady who is teaching in his school system? Or does the older lady imagine she is being neglected because she has a psychological need for more attention? Or has she developed an attitude that makes it more difficult for an administrator to treat her as a person? Or, finally, is it a fact that teachers are too often treated as "machines," but the younger teachers haven't yet developed the perception to realize it?

Women under 30 and over 50 differed significantly with women between 30 and 50 years of age in response to seven questions. The middle-aged group was more emphatic in replies that teachers do help to formulate the agenda for teachers' meetings, that the school plant is flexible enough to meet the needs of the present educational program, that safety precautions in the schools can be rated excellent, and that the schools provide

more than a report of academic grades when reporting pupil progress to parents. This group also felt more strongly than the other that the schools do not permit sufficient pupil activities, such as clubs and dances, while teachers in the outside-aged group felt more strongly that they wanted to know their pupils' parents better.

Although women teachers disagreed among themselves more than men did among themselves, a much greater difference was found between men and women teachers. Here a significant difference was found in responses to 16 of the 45 questions, although no pattern of difference between men and women teachers is revealed by these differing responses.

Men teachers were more positive in responses to questions that asked whether adjustments are made in the school program to meet the needs of the exceptional child, whether the schools allow for sufficient pupil activities such as clubs and dances, whether there are any committees of consequence that are composed of both teachers and students, whether it would be difficult to get the voters to increase the operating levy for the schools, or whether they know their students' parents as well as they would like to.

FEWER MEN TEACH LOWER GRADES

One of the questions, interestingly enough, on which there was a statistically significant difference in response between men and women was that which concerns "teachers as persons or machines," a question on which the younger and the older women also disagreed. Men were more inclined to say that the administration gives sufficient attention to teachers as "persons" than were the women.

One possible explanation of these differences may lie in the fact that while more than two-thirds of the men teach in high school and only one-third in the elementary grades, almost the reverse is true of the women. The same sort of condition may account for the differences in responses between older and younger women, since two-thirds of the women teachers under 30 but only half of the women over 50 are teaching in lower grades.

If the conclusions reached in this study are valid, then it is unfair to judge a teacher on the basis of his age or sex, because everyone is, first of all, an individual and, certainly, the words "old" and "grumpy" are not necessarily correlative. #



The moral of this little survey is precisely this: You cannot judge a teacher fairly on the basis of either age or sex.

Misuse of Statistics

FRANCIS G. CORNELL

Educational Consultant, Engelhardt, Engelhardt, Leggett and Cornell

I LIKE to think of statistics in three categories. First, there are figures—totals, averages of various sorts, measures of relationships such as correlation coefficients, and innumerable types of indices which describe some aspect of a phenomenon regarding schools and education. Second, there are the intricate theoretical and mechanical operations involved in advanced applications of statistical method. Finally, there is the gamut of fairly rudimentary ideas about the use of statistics in everyday decisions about school problems that are indispensable to good straight thinking.

Three Concepts of Statistics. The first category has to do with how to compute a mean or a correlation coefficient or how to design a chart to portray some feature of schools or school populations. Most of this requires mathematical skill available to anyone with a ninth grade education and is now taught to everyone exposed to formal training in education. In large-scale operations most of this type of computing is now accomplished by means of mechanical and electronic devices.

Some of the second aspect, the theory, is available in courses in educational statistics, but statistical theory has been developing rapidly since World War II, and there is now enough content in mathematical statistics that several universities are offering doctorates in statistics. Fortunately, communication of statistical ideas is improving, and more and more of the advances in theory are filtering down to the practitioner.¹ This is an

encouraging development, since the more our applications of statistics are derived from soundest mathematical thinking the more useful are the results.

It is not reasonable to expect educational leaders to become statisticians. All will have a course or two in statistics as a part of formal training. This will permit a knowledge of the commonest and most useful "figures" to compute in educational work and some of the theory of statistics which will help in planning effective studies and interpreting their results. But no matter how sophisticated the educator becomes technically in the subject of statistics, his decisions are useless if he is unable to work with the ideas which guide the intelligent use of statistics. Few practical applications of statistical method are complex. Usually misuse of statistics results from violations of some of the simplest rules of everyday thinking.

Logic, Common Sense, and Statistics. No statistical gadget automatically solves the problem. No single statistical index or coefficient has significance out of the context of the common sense or logic involved in the fact getting objective—whether it be purely the description of status or the testing of a hypothesis derived from highly systematized theoretical formulations. Statistical methods have been used in education as if they possessed some mystical quality of order and perfection. Statistical methods are often used in a mechanical manner as if they yielded absolute conclusions or laws of natural order. The method becomes the criterion. The researcher or the practitioner is lulled into this position by the comfort to him of thus being relieved of the onerous task of thinking. The I.Q., the normal curve, the correlation coefficient, factor anal-

ysis, and a long list of statistical techniques are mechanically and blindly applied in this manner.

I shall not attempt to document the thoughtlessness which often is engendered by the paraphernalia of such methods. My point is simply this: More intelligence than the simple numerical manipulations of statistics is required for intelligent action and decision. In fact, an unintelligent use of statistical method can lead to some absurd conclusions.

Sometimes quantitative facts are purposely manipulated by unscrupulous persons bent on deliberately leading, through advertisements or other propaganda media, to conclusions favoring only one side of an argument. Yet, as often, these errors may be the errors of the person on the receiving end of the communication channel—the person responsible as an administrator or as a teacher for interpreting facts and, on the basis of them, taking necessary action. Or it may be the researcher who is off guard because he lacks experience with statistical methods or simply lacks good common sense and logic.

It is thus with considerable good sense that Darrell Huff has written a book called "How to Lie With Statistics."² Frequently the statistical and logical slips that actually occur in daily life are more subtle than the more obvious and humorous examples which dramatize the principles violated. One such example is that of the observer who noted that persons who imbibed sufficient quantities of whiskey and water became intoxicated as did those who consumed sufficient quantities of gin and water. Applying the oversimplified canon of John Stuart Mill, ex-

¹A theory grounded, nonmathematical text is Francis G. Cornell's "Essentials of Educational Statistics," New York, John Wiley & Sons, Inc., 1956. Contained in it are references to other sources which are of direct usefulness to the teacher or administrator.

²Huff, Darrell: *How to Lie With Statistics*, New York, W. W. Norton and Co., 1954.

First of two articles on current methods of research in education.

It raises and answers critical questions about the meaning of statistics. The next will deal with common errors of interpretation.

pressed in "The Method of Agreement," the unwary observer concluded that since the common element in each circumstance was water, it was the water which produced the intoxication. Only an extreme naïveté concerning biochemistry would prevent one from seeing the "hidden cause" in this illustration. Similarly, only a few adults would be so ignorant of the basic verities of life that they would conclude that men have more children than women from statistics showing that there are 1.8 children in families of Princeton graduates, but only 1.4 children in families of Vassar graduates.

At little chance of oversimplification, I list some of the more elementary principles of which one must be aware in understanding processes of school systems.

Errors of Measurement: Computation and Definition. A considerable amount of misinformation leading to incorrect conclusions in dealing with numerical data is classifiable as measurement error. It has to do with the genesis of a particular figure, a score, an average, a correlation on the basis of which a person is making a judgment.

Let us suppose, for instance, that a fourth grade teacher has an average grade score of 3.2 for the arithmetic achievement of her pupils. How much does she know about the figure itself? Where did it come from? How was it collected? How was it administered? Who scored the tests? Was the scoring checked and verified to avoid clerical errors? How were results calculated? What kind of an average was computed? How reliable is the test? How were the functions of arithmetic achievement defined in selecting items for the test? How was it standardized? How were norms established? These

and similar questions imply many types of errors of measurement itself.

Some of the more important pitfalls in this category are as follows:

1. Errors in Computation. Unless systematic means are employed in handling quantitative data to eliminate pure computational slips, a decimal point will be left out; an unverified, unchecked sum will produce an incorrect average; an overlooked negative sign will produce an error, or other accidents in processing data will occur in such a way as to yield false figures.

2. Incorrect Yardstick. To avoid this pitfall, we should be careful not to make judgments regarding "reasoning" ability on the basis of tests which measure chiefly "memory." Expenditure analyses showing "economies" and "savings" may invalidly be cited as evidences of the effectiveness of a school administration. The number of bacteria destroyed by a new drug in a test tube may have little to do with whether that drug destroys certain types of bacteria and prevents dental caries when it is used in a dentifrice or a mouthwash. The statistically literate person uses the proper yardstick and is critical of the kind of measurements that are used by others. He would not measure change in atmospheric pressure with a thermometer as an instrument.

3. False Accuracy. By an excessive use of figures, the overzealous novice with statistics or the purveyor of misinformation may lead his audience to an exaggerated idea of the precision and accuracy of the data. For instance, during a time of great fluctuation in school construction costs, a survey of proposed county or state building plans based on estimates would surely show that millions of dollars were to be spent. Owing to the great multiplicity

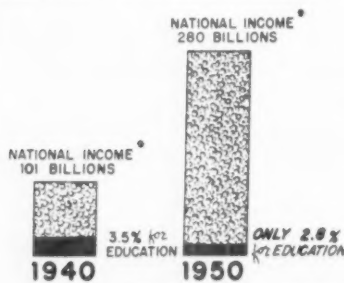
of variables involved in estimating what should be spent, how much ought to be spent, how much could be spent, and what needs to be spent on school building construction in each of the districts involved, it would be difficult to justify reporting a total of \$212,432,564.98. Undoubtedly the total should be reported as approximately \$212 million.

In handling test data and other school statistics, it is usually good practice to carry a sufficient number of decimals on work sheets to guarantee proper accuracy in computations. An average on an achievement test may actually be computed on a calculator as 23.568. As a result to be communicated to others, however, such precision is *false accuracy*. Such tests usually involve errors of measurement such that an individual pupil's score of 24 may be useful only as indicating a region on a scale, for instance, some place between 20 and 30. As a general rule, results should be reported with no more accuracy than can be justified on the basis of the accuracy of the original data.

4. Unknown Measurement Error.

As I have suggested, errors of measurement are often ignored. This consideration constantly confronts the worker in education. The building survey I referred to, based on a blanket question in a questionnaire sent to a number of local school districts, "How much expenditure would be required to replace obsolete buildings and allow for increased enrollment?" would involve an unknown measurement error. Each individual respondent would either guess or use a set of criteria or a system of estimation quite unlikely to be used by all the others. Such a survey would be a compounding of many types of errors. Often this may be avoided by depending upon ob-

GRAPHIC OPTICAL ILLUSION — CHART 1



Decline in Percentage of National Income Spent for Education Between 1940 and 1950

This chart illustrates the difficulty of representing quantities visually. A little computation will show that the black part of the 1940 bar should be smaller than the black part of the 1950 bar.

You're right—youngsters can't wait! Besides, we're way behind already. We'll have to work hard to catch up . . .

jective data—relationships of pupils to square feet of floor area and age of buildings, for instance—which can be counted accurately.

5. The Uncommon Denominator. A common misuse of statistics results from fallacious employment of percentages and ratios. It is now common knowledge in our most literate educational circles that the percentage marking system is obsolete. Yet this is an anachronism which has been slow to disappear from school operations largely because of the difficulty of eliminating misconceptions of "per cent." A student in a school still using this system of marking and grading receives 89 per cent in algebra and 74 per cent in American history. Is his achieve-

ment better in algebra than it is in American history? Studies have shown such marks are the product of innumerable errors of judgment, including the whims and prejudices of the teacher. The common denominator, "the percentage of what," is variable and elusive. Is 100 per cent complete mastery? Is it perfection? Or, as in some cases, does it represent all the items in a test?

Expenditures for schools are often expressed in terms of enrollment, average daily attendance, or some measure of number of pupils. For instance, suppose that last year District A spent an average of \$465 per pupil and suppose the expenditure per pupil for District B was \$235. Whether or not

District A really has a relatively greater financial resource with which to provide a rich and adequate educational program depends largely upon whether or not the denominator, number of pupils, is a common one. In one case is it all pupils enrolled, while in the other case average daily attendance? And even if the denominator, by definition, is the same, were they computed in the same way? Then suppose further that the facts are as follows:

District	Total Expenditure	Number of Pupils	Number of Classrooms
A	\$11,625	25	2
B	\$58,750	250	8

Also, let us assume further that District A is in a sparsely populated rural area where a small school and low enrollment are essential owing to conditions beyond the control of the school board in this area. You may observe now that District A has financial resources amounting to \$5812 per classroom, but that District B has \$7344 per classroom. By this method of reckoning, we see that it is possible that District B really is able to employ better trained and more experienced teachers and to have more instructional materials available in each classroom. So the expenditure per pupil in these two districts is not comparable. The denominator, number of pupils, does not show costs of low pupil-teacher ratios.

6. The Optical Illusion. There are many ways of graphic presentation that may give exaggerated impressions to the incautious eye.

Two charts are illustrated. Chart 1 deals with the decline in percentage of national income spent for education between 1940 and 1950. A little computation will show that the black part of the 1940 bar should be smaller than the black part of the 1950 bar. Chart 2 presumably represents school enrollment in 1950 and 1960. How many times greater is the 1960 enrollment than the 1950 enrollment? An interesting experiment is to ask friends or colleagues to estimate it by simply looking at the chart. Here are the data on which the chart was based: 1950 enrollment was 29 million; 1960 enrollment is estimated to be 37 million. This means a ratio of about 5 to 4, or about a one-fourth increase in enrollment. Is the 8 million increase exaggerated by the chart? #

GRAPHIC OPTICAL ILLUSION — CHART 2



Enrollments in Schools in Years 1950 and 1960

Another instance of a chart giving an exaggerated impression to the incautious eye. Is the 8 million enrollment increase shown on the chart exaggerated?

NEXT MONTH: *Errors of Interpretation.*



Lobby of Tallmadge Elementary School, Lancaster, Ohio. The undulating wall is the back wall of the multipurpose room and was designed to provide acoustical correction.

Schoolhouse Planning

Built to Meet Educational Specifications

J. E. BROWN

62

How Nine Specifics Were Structurally Realized

HAROLD BOLES and JOSEPH BAKER

65

Where Every Building Is Air Cooled

ROBERT D. MORROW

67

Three Votes for Movable Casework

CHARLES D. GIBSON

70

Meets Educational Specifications

Elementary school offers space and equipment for modern teaching procedures

J. E. BROWN

Superintendent, Lancaster Public Schools, Lancaster, Ohio

SINCE no building had been constructed in Lancaster, Ohio, for several years, we were all well aware of the tremendous impact the \$2.5 million Tallmadge Elementary School could have on this community. This was the "kick-off" building; thus it had to be right in every detail and from the very beginning. Additional physical plant facilities will be needed in the next few years; these are an integral part of the over-all planning for the entire system. The specifications for this first building were considered most carefully in the light of

all the succeeding phases of the total long-term plan.

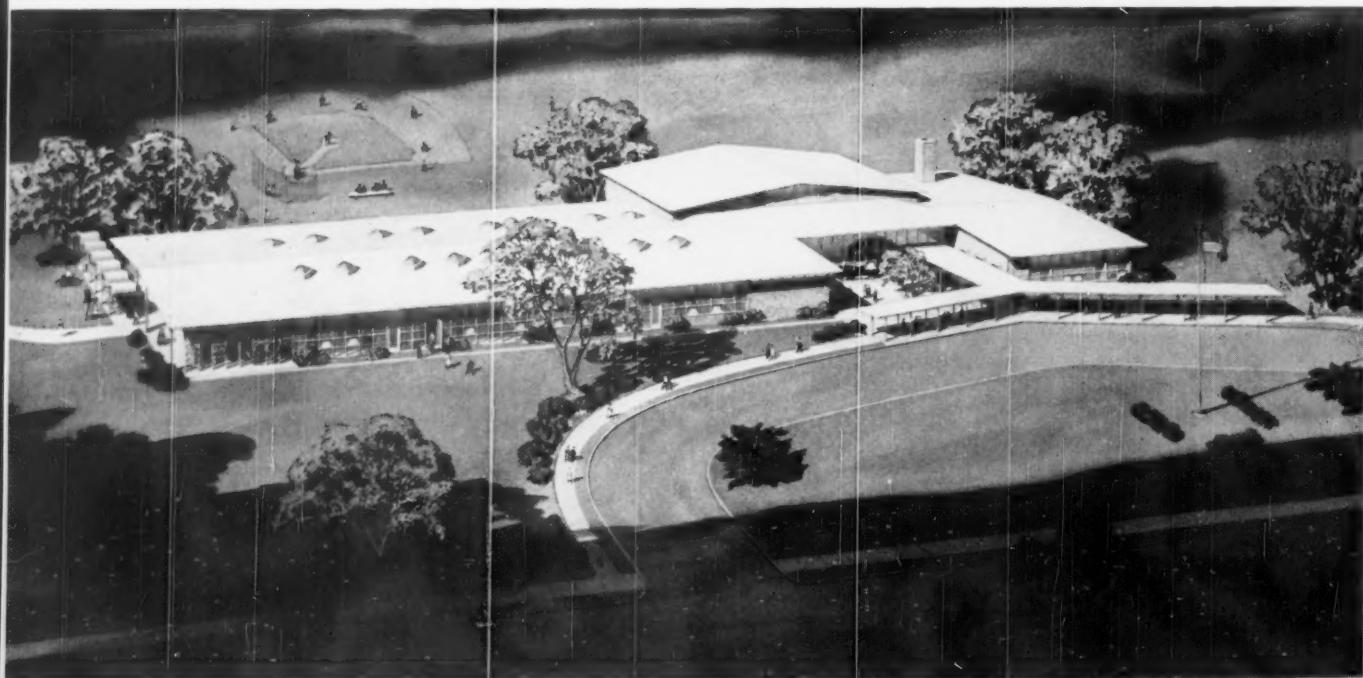
There was a definite need for a building of economical design and construction incorporating the most valuable and desirable uses of space and equipment to meet modern elementary teaching procedures.

The various committees, principals and other members of the administrative staff traveled throughout Ohio, visiting new buildings—not with the idea of copying or reproducing segments or facilities but with the idea of using good features and relation-

ships of facilities found in the best new buildings as points of departure for further discussion and planning of our own building. From all the various and many meetings and trips, certain words and phrases began to be established as requirements: "flexibility," "multi-use of space and facilities," "display space for teaching," "project counters," "mobility of equipment," and "work surfaces."

After many conferences, a list of specifics was accumulated and presented to the architect. A few of the recommendations were as follows:

Rendering of \$2.5 million Tallmadge Elementary School, Lancaster, Ohio, kick-off project in building program.



Photographs by courtesy of Lancaster Eagle-Gazette

1. Provide eight classrooms, multipurpose area, administrative suite, and conference room.

2. Plan the stage, multipurpose room, and kitchen so that they are concentrated and easily accessible for night-time activities. Many community groups would use these facilities.

3. Provide adequate space in each classroom—approximately 900 square feet per room.

4. Provide ample storage space in each classroom and in the administrative suite.

5. Plan for flexibility of equipment and the flexible use of space, essential to meet the needs of a modern elementary program.

6. Provide three chalkboard sections for each room, but at the same time provide an increased percentage of tackboard and display area.

7. Provide adequate lighting for all areas and install glare control fiberglass curtains.

8. Plan acoustical treatment for the corridor and upper side walls of all classrooms.

9. Plan a way of adding six or eight classrooms to the building.

It became apparent quite early in the planning sessions that all concerned were working within the framework of our existing philosophy of education. The committees, in reality, were telling the architect what was re-

Bronze animals are only nonfunctional exterior decoration. Flush wall construction proves economical. Roof fascia is corrugated aluminum, eliminating the old problem of expansion. Glass is $\frac{1}{4}$ inch plate.



quired better to implement the educational program that was needed in Lancaster.

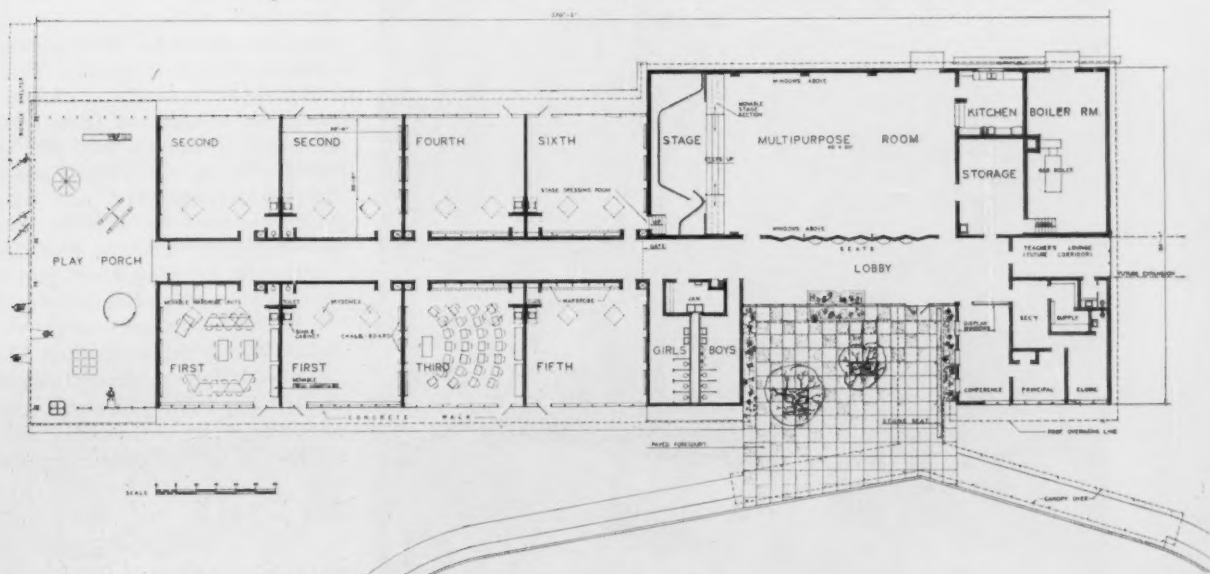
There are several unique features of the new Tallmadge Elementary School, or at least they are unique in Lancaster. The first grade rooms have glass from the ceiling to the floor, and there is, in these two rooms, the feeling of the outdoors coming inside. There is a complete feeling of free movement in space. When snow is on the ground, it comes right up to the edge of the window, where boys and girls enjoy seeing and talking about it. First grade

youngsters like to be able to see out without having to stand on tiptoe to see the world about them.

The Tallmadge Elementary School has been placed well back from the street, which is not a busy thoroughfare. The first graders are now not tempted merely to sit and stare out of doors, as there are few physical distractions from the outside.

The educational specifications stated that each room should be pretty much self-contained, so each classroom has a door leading to the outside, and each room has its own drinking fountain

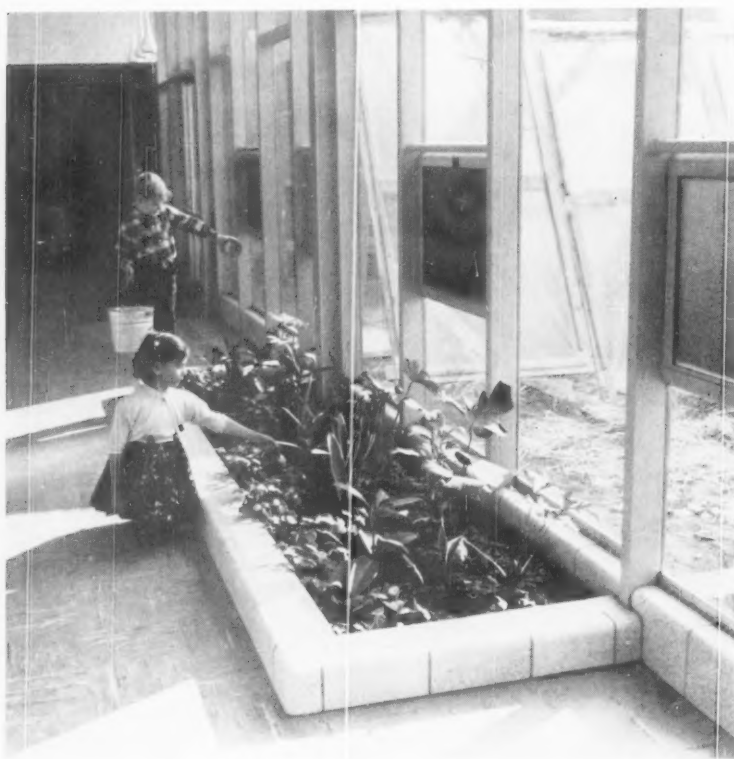
Plan of eight-classroom building, with multipurpose area, administrative suite, and conference room.





Classrooms are 30 feet square to allow maximum flexibility in furniture arrangement. Each has a door directly to the outside. An indoor planter (below) and a corresponding

outdoor area of planting help establish the close relationship between building and grounds. The outside planting had not been begun when these photographs were taken.



and classroom sink. In response to our request for "flexibility" and "mobility," the only item fastened down in classrooms is the sink in the corner. Individual toilet facilities are provided in both the first grade and the second grade classrooms, which are the only grades permitted to have such facilities under the Ohio building code. These classrooms are virtually a complete family type of unit, as children leave the room only for scheduled play or activities in the multipurpose room. The third, fourth, fifth and sixth graders use centralized toilet facilities midway in the building.

Each room is equipped with project counters which are on large casters and may be rolled about and used as room dividers or as project work spaces. The pupils work on both sides of the counters, each pupil having his own specific cubbyhole in his own favorite color. All first and second grade rooms also have movable wardrobe units with book shelving and work counter space on the back. Space for the storage of 24 by 36 inch sheets of paper is also provided in the bases of these units.



Observe the unique chalkboard installation: The board slants out for easier writing; the chalkrail has been eliminated; there is no millwork, and the height is adjustable.

Lancaster, proud of her history, named this new school for Darius Tallmadge, a pioneer of great vigor and accomplishment, because of his interest in the education of youths.

A covered play area, 30 by 70 feet, was placed at one end of the building, and the pupils enjoy it in all kinds of inclement weather. It is free of snow, and the children find it wonderful to play outdoors even in our severe mid-western winter. The steel mullions of the covered play area are so spaced that the glass could be filled in and two more rooms added quite easily. But this covered area has proved so valuable that officials, teachers and pupils hope it will never be converted into classrooms. A second wing of eight classrooms will be completed as planned on the other end of the existing building. The covered play area has become a worth-while part of the physical education, health and playground programs of this particular building. It has attracted considerable attention throughout central Ohio.

The proof of the pudding is always in the eating. The proof of the thorough planning for the Tallmadge building is found in the smooth operation, efficient use of space, and well planned facilities which have enhanced the existing elementary program. #

How Lancaster's Nine Specifics Were Structurally Realized

HAROLD BOLES and JOSEPH BAKER

Joseph Baker and Associates, Architects, Newark, Ohio

WANTED: One elementary school for an old, conservative and prosperous middle sized Ohio city—a school which will:

1. Embody every desirable facility for modern elementary teaching practices.

2. Remain new in design for the longest time.

3. Not startle the townspeople but, rather, inspire their admiration and civic pride.

4. Set the pace for two \$1 million junior high schools to be constructed from the same bond issue.

Such might have been the description in the program of requirements for the Tallmadge Elementary School

in Lancaster, Ohio. When presented to us by the board of education, Supt. J. E. Brown, and a citizens committee, it seemed a large order indeed.

That the requirements were satisfied is evidenced by the fact that the Tallmadge design was one of four granted the top "Award of Merit" by the A.A.S.A. jury at the regional meeting in Cleveland in 1955 and then was requested for hanging in the national gallery of the A.I.A. in Washington, D.C. It later was selected for a touring educational exhibit to principal cities.

Construction contracts totaling less than \$238,000 give this 240 pupil school a low per pupil cost of \$992 and a per square foot cost of \$11.68.

Land, fees, site improvements, and furnishings are expected to raise the total to an estimated \$300,000. In addition to eight classrooms, each 30 feet square (four primary rooms have their own room toilets), it also has such quality features as a generous multipurpose room complete with stage, a forecourt paved in gray and white concrete checkerboard pattern and landscaped, canopies over entrance walk and bus unloading area, a sheltered play porch for bad weather, an administration suite, a teachers lounge, skydomes and dual provisions for expansion.

The building is completely fireproof; there is no wood in the entire structure. Bearing walls of face brick and

cinder block or ceramic glazed tile support the steel understructure for a 20 year bonded roof applied over a mineral bound fiberboard structural deck. Classroom ceilings are surfaced with hard plaster, and acoustic tile is mounted on the side walls. All walls have a glazed tile base; corridor, lobby, clinic and multipurpose room walls are completely of tile. Doors, frames and sash are all steel; all hardware is solid bronze, and glass is 1/4 inch plate. Heating is by forced hot water, with unit vents above the ceiling of the central corridor. Plastic domes admit secondary daylight along the inner walls of the classrooms.

Classroom sinks with drinking fountains, as well as custom designed mov-

able project counters and wardrobes, assure teachers of almost complete flexibility. Future expansion is planned through removal of the teachers lounge and extension of the corridor, or the play porch could easily and economically be enclosed to provide an additional pair of rooms—although we do not recommend dispensing with so nice a feature.

The play porch, while not unique, is most uncommon in Ohio. It is sized to equal exactly two classrooms plus corridor in area. Equipped with playground apparatus and surfaced with crushed limestone, it offers protection from the elements to small children while at the same time it permits release of childish exuberance and desirable activity in a healthy out-of-doors atmosphere in all but the most severe inclement weather.

Conventional brick bulkheads below window sills were eliminated in two first grade rooms in order to provide more sunlight and an uncluttered environment for the very young children. Superintendent Brown believes there is also public relations value in the public's being able to see into classrooms.

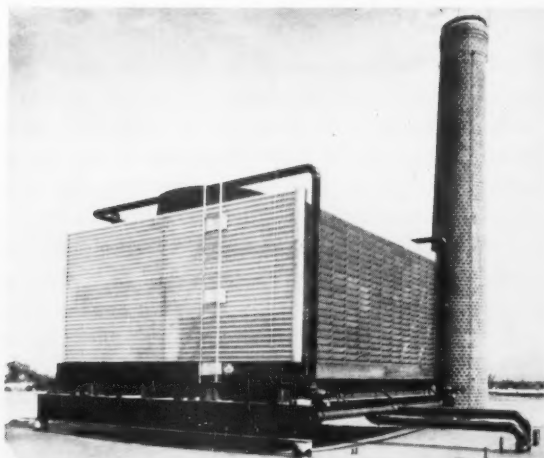
Colors used on interior surfaces are light and clear. Seats and lounging areas—for children and adults—are provided inside and out. A corridor gate allows controlled community use at night. The stage has two unique features: Side rolling stage extension boxes provide optional location of two or three sets of steps up to the stage level or two separate extensions to the stage floor itself; no proscenium is used, so draperies will extend from wall to wall to provide any desired stage opening up to 40 feet. This plan is considered more economical than the usual proscenium wall, and it, at the same time, provides more color and a degree of flexible decoration for the room. The main front curtain was especially designed by the architects and is being printed on flameproofed linen in colors selected to complement those used elsewhere in the room. Fiberglass glare curtains to be installed at all windows will give positive glare control and add to the homelike character of the school.

A bicycle garage in frivolous design, a staff parking lot, and a 12 acre site are other touches which seem to assure that the Tallmadge school will "inspire admiration and civic pride" not only of townspeople but of teachers and pupils as well. #



Above: Another classroom, showing built-in sink with its drinking fountain. Project counters are movable and have cubicles in varying colors. Each classroom has a built-in storage closet and a movable wardrobe. Below: Covered play porch can easily be made into additional classrooms. Fantastic roof of the bicycle garage intrigues the youngsters and adds a decorative touch.





Above: Cooling tower on Catalina High School, Tucson.
Right: Louvers at top of teacher's closet distribute air from tunnel paralleling building and under 5 feet of classrooms.



In the school system of Tucson, Ariz.,

Every Building Is Air Cooled

At an installation cost of 30 cents per square foot

ROBERT D. MORROW

Superintendent of Schools, Tucson, Ariz.

WARM weather comes early in the spring to the southwestern desert metropolis of Tucson, Ariz., and lingers long into the fall months after the start of school.

To enable pupils and teachers to do their best work in the classrooms, all buildings of Tucson's rapidly expanding school system will have cooling equipment installed by September of this year.

Early Spanish settlers of the region constructed buildings with few windows and thick adobe walls to protect interiors from the scorching sun. Modern school construction, with wide expanses of glass, makes some form of cooling or air conditioning mandatory many months of the school year in Tucson.

High humidity is no problem, with the possible exception of one or two days during the summer months, when

school is not in session. With refrigeration there is never a humidity problem.

Considerable study was given to various types of cooling installations in this area. At first, evaporative coolers were installed either on the roof or in attics. However, after two or three years we found that maintenance and operation were much simpler if plenum rooms were provided on the ground floor.

Contracts for the newer schools have included cooling systems, and a recent bond issue has provided funds for installation of cooling in any older buildings which were without coolers.

Evaporative cooling, efficient in this dry desert climate, is utilized for all elementary school buildings. The current remodeling program for older buildings among Tucson's 36 elementary schools calls for adequate cooling

systems, and five new elementary schools to open in the fall will be air conditioned.

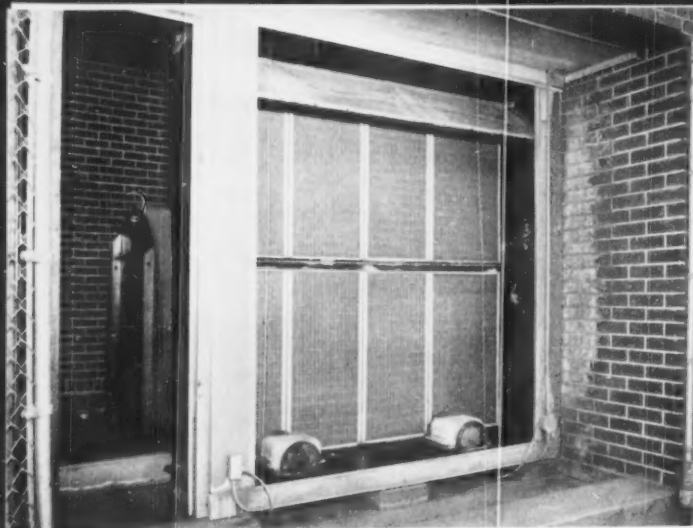
Cost of installing cooling equipment in a new elementary school is between \$9000 and \$10,000, or approximately 30 cents per square foot.

For installation in an existing building, the cost is about 20 per cent more than for initial installation during construction.

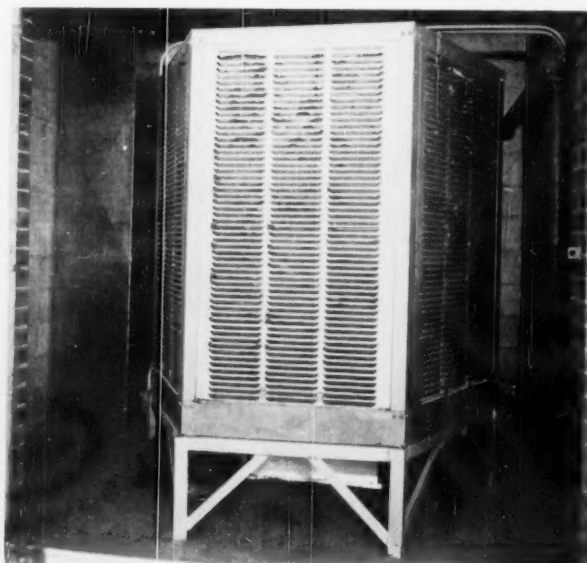
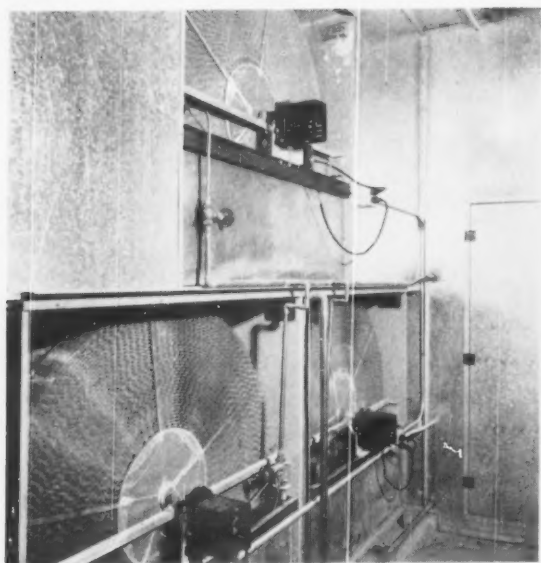
It takes from three to four weeks of actual construction time to install air conditioning equipment in an existing building. This includes the extra work involved in relocating lighting and other fixtures.

A new type of refrigeration cooling using steam is being installed in Tucson's new \$2 million Catalina High School plant at a cost of \$120,000.

This system, the first of its kind in southern Arizona, is a 400 ton unit



Left: Evaporative cooling setup for elementary school with two motors slinging water above fiberglass screens. Fan, located in rear, pulls air at high velocity through fiberglass before distributing it to tunnel system. Lower left: Typical rotary type of evaporative cooler as used for classroom wing of Pueblo High School. Wheels are made of concentric rows of copper screen wire that revolve continuously at about three revolutions per minute in a tank of water. Air is drawn through upper portion of rotating screen wheel and moisture is evaporated, giving a cooling effect. Below: Typical elementary school cooler with down delivery that brings cool air to tunnel beneath classrooms and distributes that air through grilles at the top of the teachers closets.



which pumps hot water for heating and reverses the procedure in warm weather to pump chilled water for air cooling.

At another new high school, Pueblo, opened in April of this year, evaporative cooling with a rotating copper screen system is used for the classroom unit, and the auditorium and administration offices are cooled by refrigeration.

To relieve the burden on cooling units, metal louvers are now standard equipment, providing shade for classroom and office windows along the south and west sides of new school buildings. The louvers are also being erected on older buildings to keep the hot sun off the glass.

One of the more novel ideas for cooling elementary schools was developed by our engineering and maintenance department a few years ago and first incorporated into the plans for

Cragin Elementary School. Floors for the one-story elementary schools had previously been suspended on steel joists, but, in order to cut costs, builders began pouring cement slab floors directly on the ground in recent years. This was an invitation for termites to start eating school property, with access to the walls made easier.

TUNNEL IN OUTSIDE WALLS

Engineers hit upon the idea of solving several problems at once with construction of a 5 by 4 foot concrete tunnel built into the exterior wall all around the building.

The tunnel is used to house hot and cold water pipes, main electric conduits, valves for radiant heat, and sewer lines and also serves as a cooling duct, from which cold air in the tunnel is distributed to each classroom. The tunnel aids in termite control as well.

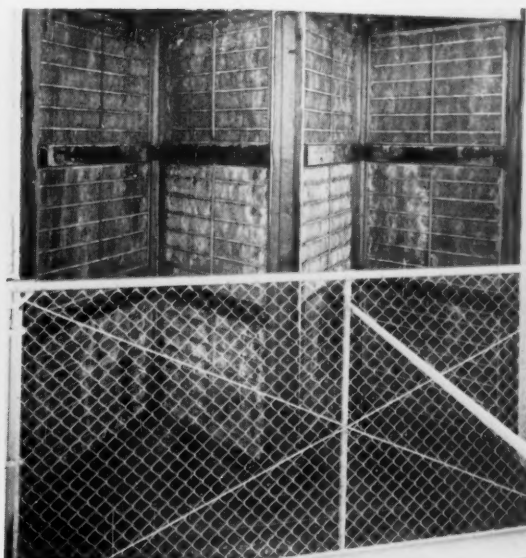
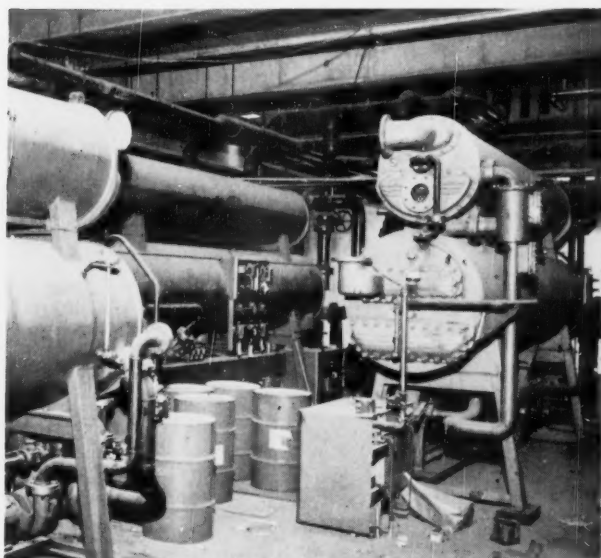
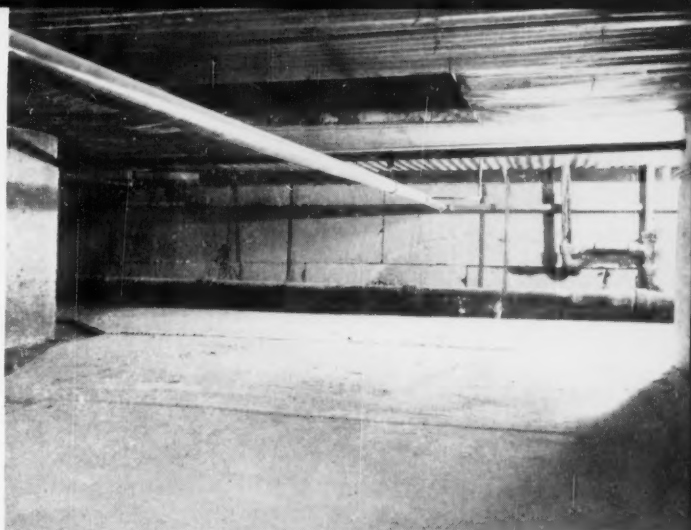
At the newest junior high school in the Tucson system, Vail Junior High, an extensive system of evaporative coolers was built into the plant at a cost of about \$12,000. Two large coolers keep the classroom section comfortable in warm weather, and five other coolers are used for the shop wing, kitchen, offices and other rooms.

The engineering department figured the cost of cooling the big new junior high school at some 17½ cents per square foot. In remodeling plans for older elementary schools, the cost is figured at \$375 per classroom.

While our engineering and maintenance department could have handled this air conditioning project, the work was assigned to an independent architect because of the pressure of our large building program and the lack of personnel and time.

In extremely hot weather classrooms are kept approximately 15 to 20 degrees

Right: Typical tunnel system under classrooms that acts as a plenum chamber for distribution of cooled air to rooms. Below: Installation of heat absorption machines in new Catalina High School. The heat absorber uses steam to chill the water. Water is circulated through the absorber and is chilled to 45° before being distributed through pipes to convectors in each classroom area. Lower right: Vertical excelsior pad area as used in Alice Vail Junior High School. The pads are shaped in a "V" position in order to get a maximum amount of pad area in limited space. These pads run under a continuous stream of water, and air is drawn through by a large fan and is distributed by ducts to the various classrooms. Controls in all classrooms are manual.



cooler than the outside temperature. Controls are manual, so that the temperature of each classroom can be individually controlled by the teacher.

In refrigerated buildings the windows should be closed but, we have found, not necessarily sealed. With evaporative coolers the windows should be opened slightly.

TEACHING IS PLEASANTER, BETTER

When the first cooling systems were installed several years ago, there was quite a reaction on the part of the parents who had come to Tucson because their children had various types of bronchial disturbances. However, the last few years all of the requests have been for additional cooling, and there have been no complaints. Cooling systems are designed for an air change every three minutes, which wouldn't adversely affect more than a very few children. Whenever parents

or a doctor say that a child should have special care or attention, special arrangements are made for that child—just as arrangements are made for a child who has a slight vision or hearing impairment.

No definite check has been made in regard to increased efficiency, but remarks from teachers, custodians, principals, supervisors and all other members of our staff, plus the pupils and parents, indicate that everyone concerned is greatly benefited by the cooling, and the instructional program itself is made both more pleasurable and more effective.

Air conditioning equipment does not impair the function or beauty of the classroom. In all classrooms, grilles are placed at the top of the teacher's closet. For elementary schools, there are additional grilles for multipurpose rooms and in large work areas. In high schools and junior high schools,

additional grilles must be provided in large areas.

Installation of equipment has not resulted in the loss of desirable storage space. There are no fans or other machinery that will cause disturbance in the classroom.

NO OPERATING FIGURES AS YET

At present, the air conditioning project seems to involve no additional safety precautions or additional factors of liability. No specific data are available on anticipated costs of maintenance, operation, power, replacements and personnel. We felt that the project was so worth while that the schools should be air conditioned even though we know that costs of maintenance and operation will be slightly increased.

The equipment, if properly maintained, should continue to operate efficiently for from 10 to 12 years. #

THREE VOTES FOR MOVABLE CASEWORK

BY EDUCATORS:

Funds, floor space saved
Arrangement flexible
Indoor, outdoor utility

BY ARCHITECTS:

Detailed work slashed
Supervision grief cut
Construction time cut

BY SUBCONTRACTORS:

Pricing sharpened
"Specs" standardized
Bidding speeded up
Work improved

CHARLES D. GIBSON

*Supervising Field Representative for School Planning
California State Department of Education*

This article presents research and recommendations which have resulted from a long period of study and observation by a man who has been a teacher and a school administrator, as well as a school planner.

THIS is the case for providing movable rather than fixed casework in classrooms. Not only is movable casework less expensive; nearly always the materials in it and the workmanship are of superior quality.

This article tells why movable casework is more economical and summarizes the reasons educators, architects and subcontractors or mill operators prefer it.

EDUCATORS' REASONS

Less Capital Outlay. When casework is *built into* classrooms, the plans usually call for the "full treatment" because "we might need it." The architect works on the theory that too much is better than too little. When casework is *movable* and is purchased separately from the building, like furniture, the school administrator can study storage needs, purchase the units he actually needs, and put them where they are needed. He can relate casework needs to the educational program, administrative policies, teacher techniques, enrollment trends, budget limitations, and even tax rate.

More Economical Use. Movable casework can be designed against the educational program needs by grade level; it can be placed where it is needed in a school plan. Thus storage units can be kept closely adapted to current educational emphasis. They can be supplemented by individual units, can be purchased as needed, and can follow grade levels as buildings are enlarged and space is reassigned.

Saves Floor Space. When casework needs are studied in terms of program needs, less casework is required, and what is purchased does a better job. When only what is needed—on a grade level basis—is provided, considerable classroom floor area is saved to be used for other educational purposes. Thus expensive floor space is not being taken up by expensive built-in casework. The capital outlay and the instructional dollars alike are buying better educational service.

Better Construction. When casework is purchased like furniture and other kinds of equipment, more care is taken in its design and construction. It is more likely to be *dimensioned for use* and sturdily constructed.

Adds Flexibility. Movable casework can serve as space dividers to

create work and display centers in classrooms. It provides for flexibility of arrangement within the classroom.

Permits Changes. Built-in casework inhibits the internal flexibility of a building area by becoming an integral part of fixed partition walls. Movable casework fits perfectly into today's design trends for nonbearing, movable or expendable partitions. It encourages rather than inhibits building space rearrangement when this is necessary to serve better a changing educational program.

Can Be Used Outdoors. Movable units can be used in both indoor and outdoor work areas (tool carts, clay trucks, easels and so forth).

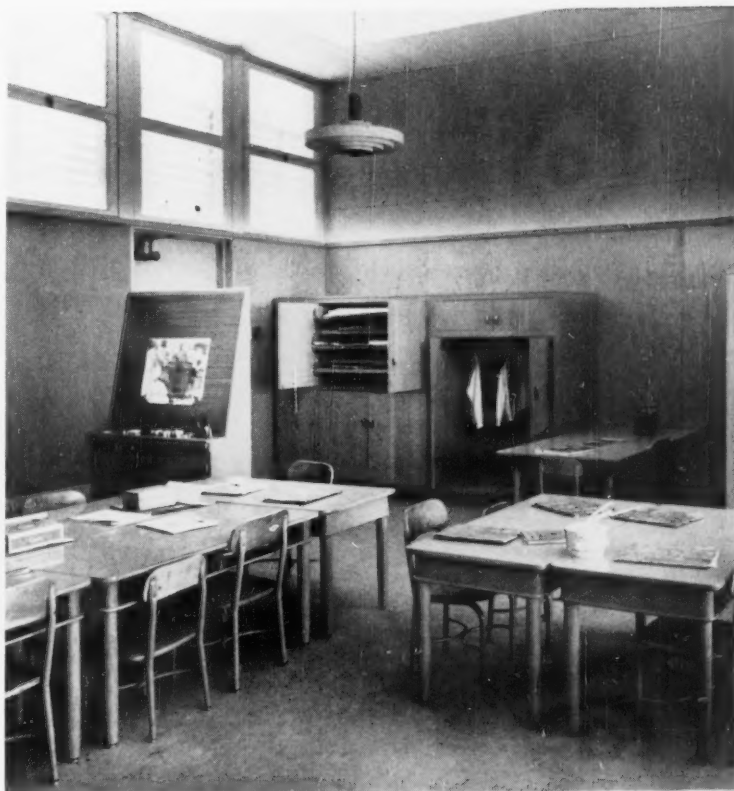
Saves Fees. By taking casework out of the general contract and buying it like furniture and other equipment, the school district can save money. In one instance, a reduction of \$400 in the cost per classroom was estimated by the saving of the architect's fee of 8 per cent, the general contractor's fee of 10 per cent, and other percentages on subcontracts of building finishing trades.

ARCHITECTS' REASONS

Less Grief. Every architect contacted in this study stated that the preparation of well detailed shop drawings and specifications for casework costs the architect more than the fee he receives for that portion of his work.

Hard to Find Designers. It is difficult today to find designers who have the intimate knowledge of woods and lumber grades necessary to lay out good, yet economical, casework plans. (Continued on Page 72)

Top: High cases can be fastened to the 7 foot high plywood wall; also chalkboards, tackboards and pegboards can be attached. Paper is kept in a storage unit with large shelves that slide out. The free standing easel has an easily cleaned linoleum face and a removable metal tray. The storage cupboard below the easel holds standard size paint containers. Bottom: The sink case (located just inside the door leading to the outdoor classroom area) is the only "fixed" cabinet in this room. It is dimensioned for pupil use and has a separately vented drinking bubbler.



All photographs taken in Los Angeles County schools.





Some teachers come early and stay late just for the fun of trying out new casework arrangements. One said being able to "push things around" at school saved wear and tear on her furniture and resulted in a more peaceful relationship with her husband.

Little Control. The architect has little chance to control the materials actually used or the quality of the workmanship involved in the construction of casework. At the same time, his client holds him responsible for any poor or defective installations.

Poorer Workmanship. The cutting, fitting and scribing of built-in casework to fit irregular wall and floor surfaces and the application of finish and hardware on the job generally result in a less satisfactory casework job than would be produced when most of these processes are done off the job under millwork conditions.

Wasted Time. On a well managed construction job for a 400 to 500 enrollment elementary school, as much as 30 days can be saved in construction time when movable casework is used. This saving results mostly from the time saved by eliminating the interrelationships of the workmen in the interior finish trades, such as plasterers, carpenters, painters and floormen.

Following is a comparison of installation economies, real or alleged:

Floor Covering. When small or medium sized fixed cabinets are installed in a room, the saving in floor covering cost is negligible because of the increased labor cost of cutting and fitting around the base of the cabinet. In regular shaped areas the cost of installing floor coverings is lower

where special "cut-outs" are not necessary.

Wall Finish. Where small or medium sized fixed cabinets are installed, the saving in wall painting is negligible because of the increased labor cost of "cutting in" and covering or protecting the casework.

Special Blocking. In the case of fixed cabinets, additional cost is incurred because of the installation of blocking or backing to receive the casework.

Job Pick-Up. Spackling and touch-up operation entailing additional coordination of work crews are reflected directly in time for fixed cabinet installations.

Blocking in Steel Stud Walls. Where partitions are of steel studs, metal lath, and plaster, the cost of installation of fixed cabinets is increased because of the installation of required blocking or backing for casework.

Fastening to Masonry Wall. Where fixed cabinets are installed on masonry walls, scribing of casework or moldings, plus the anchorage to masonry, increases the cost.

SUBCONTRACTORS' REASONS

The Woodwork Institute of California is an association of many of the high-grade woodworking mills in this state. It employs a technical

consultant, Les Harter, who works with both institute members and architects in an effort to raise the quality of wood products without a proportionate increase in price. An "efficiency expert" you might call him. Mr. Harter has detailed a line of wood casework that is available to school districts and architects. In this work he checked frequently with me to be sure he was meeting educational objectives. He also consulted with many architects who design schools and checked hundreds of classroom installations of both fixed and movable casework.

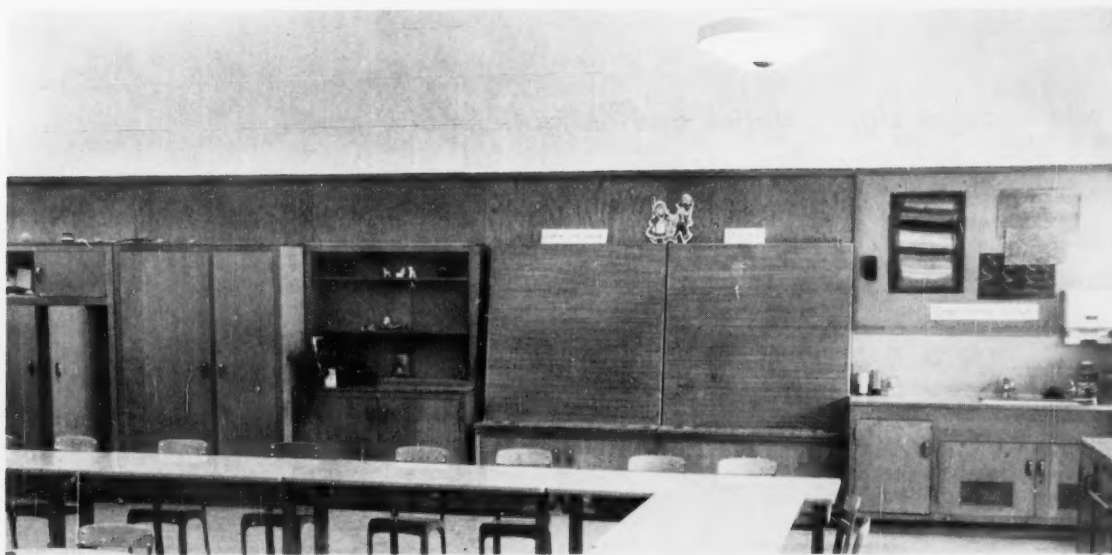
At the end of his research, we spent one full day discussing his findings.

Mr. Harter defined the mill operators' casework problem as follows:

Hurried Bidding. General contractors don't give subcontractors much time to compile a casework (or any other) bid. Estimates must be made under time pressure conditions. This is not conducive to "sharp pencil" pricing.

Loose Specifications. When casework "specs" are sloppy, the subcontractor may: (1) misfigure costs or leave out part of materials; (2) make up dollars by interpreting loose "specs" to his advantage.

The quality of work is determined by both the designer and the manufacturer. The designer of casework generally is not experienced in the highly specialized field of millwork.



The teacher who wants a more formal atmosphere in her classroom can line up movable cases against the wall and remain secure in her Nineteenth Century approach to learning. Her successor may have different ideas, and she should be able to express them.

He is most likely to force a "shotgun" marriage of materials and wood grains (such as solid stock joined to plywood).

Combine this kind of shop drawing and "specs" with an inexperienced millworker—of whom there are many—and the result is poor construction.

Construction Discrepancies. Most specifications for built-in casework require that "job measurements shall be taken prior to beginning of construction." It is not until approximately 60 days before the completion of the building that the mill operator can take job measurements. The construction simply is not far enough along until then. This short amount of time allowed the subcontractor virtually guarantees poor construction for the following reasons: (1) every action must be hurried; (2) short cuts in construction of casework are employed; (3) lumber cannot be properly seasoned; (4) careless workmanship is tolerated that wouldn't be permitted under normal conditions.

Mr. Harter defined the mill operators' casework solution as follows:

1. Develop a standard set of casework for various classroom storage needs. Every member of his institute and others would have the fully developed shop drawings and specifications. Such a solution would result in: (a) standard pricing, (b) standard details and "specs," (c) firm bids

given in a matter of minutes, (d) lowest price possible consistent with uniform quality, (e) repetition of manufacturing process resulting in increased production efficiency and decreased price without reduction of quality.

2. Such a program of movable, standardized casework would result in the following advantages to the mill operator:

A. Mills could have a smooth flow of production; there would be no delays for job measurement; men would keep working at a steady rate. The result—cheaper production.

B. The mill could buy materials with planning and take advantage of bargains in buying. Materials used could be properly seasoned.

C. The Woodwork Institute could effect a continuing program of research toward the improvement of the product. This would not be possible with a product that is custom designed for each school.

D. The mill could be sure of its price factor. It is just as unhealthy for the mill to bid too low as for the client to pay too much. Poor pricing is not beneficial to anyone.

E. The school district could buy and rebuy without going through an architect or contractor. Casework could be pulled out of general construction contract, saving fees and overhead costs. The supply could be supplemented as needed with funds available.

F. Casework could be replaced without tearing out plaster walls and floor. When a piece needed replacing or refinishing, or to have its hardware fixed, it could be removed from a classroom and another identical one could be substituted while repairs were made. Classroom routines would not be disturbed.

G. Better quality finishes can be applied in the mill under spray booth control conditions. Lacquer or synthetic finishes cannot be applied in a classroom because of safety laws.

3. The advantages of assembling casework at a mill rather than on the job are as follows:

A. Hardware is installed by jigs and machines rather than by hand tools.

B. Painting and finishing are done under controlled conditions.

C. Casework is not delivered until the building construction is complete. This eliminates on-the-job abuse to casework from other trades. When casework is assembled on the job, raw wood often is exposed to the elements if rooms are not completely closed in. Damp plaster often causes warpage in raw wood.

D. On-the-job inspection costs are eliminated.

E. Installation costs are eliminated.

F. Complicated interrelationships of several building trades — plasterers, masons, carpenters (rough and finish), floor men and so forth—are eliminated.

Legal rights, duties and obligations of

The Architect for the School Plant

LEE O. GARBER

Professor of Education, University of Pennsylvania

THE legal rights, duties and obligations of the school architect are not clearly understood by many superintendents, boards of education, and even architects themselves.

In a number of states, the statutes are rather specific in their definitions of the rôle of the architect. In other states, they are not. Nevertheless, this matter has been the subject of litigation on sufficient occasions so that definite legal principles may be formulated based upon judicial rulings.

Employment of Architects. In many states the statutes specifically authorize school boards to employ architects to draw up plans for public school buildings. In some states no such specific authorization may be found. In these states the question of whether school boards have such authority has frequently been before the courts. They are in agreement that, in the absence of any statute forbidding it to do so, a school board has the authority to employ an architect. They reason that this authority is implied in the board's statutory power to provide necessary school buildings.¹ A New York court said:

"The board, having the power and authority to build a new building, had power and authority to employ archi-

tecs to draw the necessary plans and to make the necessary estimates and specifications. Without such services the board could not make out its estimates of the cost of the proposed building."²

An Oregon court has held that, where a school board planned to erect a building in units, it had the authority to employ an architect to plan all of the units at the same time, even though the construction of some of these units was to be deferred to some future time.³ It also held that failure of the board to proceed with building the units, because of conditions imposed by the war, did not act to terminate the contract with the architect.

Fees. In the employment of an architect, the fees which he is to receive under his contract are, quite often, in excess of the statutory limit set as the maximum for which a school board may contract without resorting to competitive bidding. Then the question arises as to whether the board must make use of competitive bidding in choosing the architect.

In general, courts appear to be in agreement that a statute requiring competitive bidding for schoolhouse construction is inapplicable in the case of contracts for the services of architects and engineers, as their services are of a personal, technical and professional nature.⁴ (Sometimes such

statutes specifically exempt contracts for the payment of teachers, janitors and other professional persons from competitive bidding, in which case contracts with architects are also exempt.)

For example, in New York, where the statute required that a contract involving an expenditure in excess of \$1000 be let only as the result of competitive bidding, it was held not to apply to a contract with an architect, on the ground that the services he was to render were of a professional character.⁵ Likewise, in North Dakota, where a competitive bidding statute exempted contracts for teachers' salaries, "professional services, janitors' wages, . . . [and] school textbooks," it has been held that contracts with architects were to be considered in the same category as those exempted.⁶ In Pennsylvania, where the architect was not to supervise construction, apparently, it has also been held that competitive bidding need not be followed in the employment of a construction supervisor.⁷

In this connection a Tennessee court's decision is of interest.⁸ Here the court held that a contract between a school board and an architect, in which the board agreed to pay the architect 6 per cent commission, was not void simply because it was shown that other architects could have been employed for a 4 per cent commission. The court reasoned that, in a contract for professional services of this sort, the board was justified in considering such factors as training,

¹Kistner v. Pomeroy, 258 P. 619, 84 Cal. App. 550; Wyckoff v. Force, 214 P. 439, 61 Cal. App. 246; Barringer v. Guilford School Township, 194 N.E. 651, 100 Ind. App. 445; Fiske v. School District, 80 N.W. 265, 59 Neb. 51; Sleight v. Board of Education, 170 A. 598, 112 N.J.L. 422, rever. 159 A. 707, 10 N.J. Misc. 523; People v. Board of Education, 190 N.Y.S. 798; Weathers v. Layton and Forsyth, 230 P. 750, 104 Okla. 14; Laing v. School District No. 10, 224 P. (2d) 923 (Ore.); Kline v. School District, 35 Berks Co. 181 (Pa.); Board of Trustees v. Jacob, 170 S.W. 795 (Tex.); Harlingen Independent School District v. C. H. Page & Bro., 48 S.W. (2d) 983; Pehrson v. School District, 77 P. (2d) 1022, 194 Wash. 334.

²People v. Board of Education, 190 N.Y.S. 798.

³Jacobberger v. School District, 256 P. 652, 122 Ore. 124.

⁴Krohnberg v. Pass, 244 N.W. 329 (Minn.); N.Y.C.R.R. Co. v. County of Westchester, 159 N.Y.S. 560, affirmed 121 N.E. 880, 224 N.Y. 646; People v. Board of Education, 198 App. Div. 476, 190 N.Y.S. 798; Rosatti v. Common School District, 204 N.W. 833, 52 N.D. 931; Weathers v. Layton and Forsyth, 230 P. 750, (Okla.); Hibbs v. Arensberg, 119 A. 727, 276 Pa. 24.

⁵People v. Board of Education, 198 App. Div. 476, 190 N.Y.S. 798.

⁶Rosatti v. Common School District, 204 N.W. 833, 52 N.D. 931.

⁷Hibbs v. Arensberg, 119 A. 727, 276 Pa. 24.

⁸State v. Brown, 21 S.W. (2d) 721, 159 Tenn. 591.

**True, statutes do differ among and within states,
but these nine principles of law will assist any
school authorities contracting with an architect**

experience and personal integrity in selecting the architect—factors that might justify a higher commission.

Authority of the Board to Contract With an Architect. Even though the board may employ an architect, its authority in this respect is not always unlimited. In this connection it has been held in some jurisdictions that a board may not contract with an architect until such time as the money available for the payment of the building is in the hands of the board.⁹ The courts reason that a statute providing that no contract for a building shall be let until bonds have been approved or sold is applicable to a contract with an architect for the preparation of plans and specifications for the building. In this same connection, it has been held that, where the statute required the approval of building plans and specifications by the state board of education, a contract with an architect was void when it was made previous to the time the state board granted its approval.¹⁰

On the other hand, according to other decisions which appear to be more logical, a contract between a school board and an architect is legal even though the board does not have the money to pay for the construction of the building in its hands at the time,¹¹ and even if it never constructs the building.¹² In such cases the courts reason that the preparation of plans, like the buying of a site, is not essentially a part of the building operation

but is a preliminary step in determining the amount of funds necessary. In this connection, a Nebraska court has said:

"A board of education has power to contract with an architect to prepare general drawings and specifications for a schoolhouse, as a preliminary to determining whether a building, and, if so, of what kind, shall be constructed, although, for want of funds devoted to building purposes, it may at that time have no power to erect the building. . . .

"The projected buildings were never erected; the preliminary plans and drawings could not be said to be a part of any construction of buildings, and, if not, the expense of them was not any part of a building, or necessarily to be paid from a building fund. They were ordered for the use of the district, and were necessary, as much so as many other articles or services which come within the general expenses of a school district, and must be paid for from the general fund."¹³

In another somewhat similar New York case, the statute required the board to adopt a resolution specifying that a school building was needed and estimating the cost thereof before it could contract for the erection of the building. Where the board contracted with an architect before it passed such a resolution, the legality of the con-

tract was later questioned by the board itself. It contended that it could not be required to carry out its part of the contract, because it was entered into previous to the enactment of the resolution. In holding against the board and in favor of the architect, the court said:

"In the case in question the board was acting under a statute which, in the first instance, required it to prepare an estimate of the cost of the proposed building. To do that it was necessary to have the services of an expert. The board could not comply with the law and advertise for bids until it had such expert services, and no appropriation could be made for such services until the cost of the building was ascertained, and the cost of such services was based upon the cost of the building."¹⁴

Recovery on Architect's Contract. Another limitation upon the board's authority to contract with an architect relates to the authority of a board to enter into a contract with an architect to furnish plans for a building that would cost in excess of the amount available for its construction or that would cost more than the board might legally spend. Where this question has been the subject of litigation, the courts have rather generally held that such a contract is *not* valid.¹⁵ In New Jersey, for example, where an appropriation of \$200,000 had been made "for the purchase of . . . sites, the procuring of plans and specifications, and for . . . construction purposes," the board employed an architect to draw plans for a building to cost \$400,000. The court held that the board, which was without authority to construct a \$400,000 building, was without authority to contract for the plans for such a building. Further, it reasoned that the architect was bound to know the amount of the appropriation and that there could be no recovery for his services.¹⁶

On the other hand, it has been held that an architect may recover on a contract for plans for a building, to construct which would cost in excess of the constitutional debt limit, where the contract did not stipulate the

⁹Mountjoy and Frewen v. Cheyenne County High School District, 240 P. 464, 78 Colo. 162; Barton v. Tokio Independent School District, 49 S.W. (2d) 939 (Tex.); Harlingen Independent School District v. C. H. Page & Bro., 48 S.W. (2d) 938 (Tex.).

¹⁰Fletcher v. Board of Education, 88 A. 834, 85 N.J.L. 1.

¹¹Barringer v. Guilford School Township, 194 N.E. 651 (Ind.); Bonsack & Pearce v. School District, 49 S.W. (2d) 1085 (Mo.); Fiske v. School District, 78 N.W. 392, 58 Neb. 163, affirmed 80 N.W. 265, 59 Neb. 51; People v. Board of Education, 198 App. Div. 476, 190 N.Y.S. 798; Weathers v. Layton and Forsyth, 230 P. 750, 104 Okla. 14.

¹²Fiske v. School District, 80 N.W. 265, 59 Neb. 51; People v. Board of Education, 198 App. Div. 476, 190 N.Y.S. 798.

¹³Fiske v. School District, 80 N.W. 265, 59 Neb. 51.

¹⁴People v. Board of Education, 198 App. Div. 476, 190 N.Y.S. 798.

¹⁵Perkins v. Board of Education, 161 F. 767; Bair v. School District, 146 P. 347, 94 Kan. 144; Ritter v. School District, 140 A. 439, 291 Pa. 439.

¹⁶Perkins v. Board of Education, 161 F. 767.

amount the building was to cost but merely provided that it was to be "suitable."¹⁷ The court reasoned that the architect had the right to assume that the school board would, in some manner within the keeping of the law, provide the necessary funds.

In a somewhat similar type of case an architect had agreed to draw the plans for a building to be erected at a cost not to exceed a certain amount. The lowest bid exceeded this amount by almost 50 per cent, and he was not able to recover.¹⁸ Likewise, in Oregon, where an architect drew plans for a building, the cost of constructing which would have exceeded the amount of money the board had available, it was held that the architect could not recover for his services.¹⁹ In so holding, the court said:

"It is clear . . . that in pursuing his course he was not performing his contract, and that he is entitled to no compensation for his work. A tailor who makes a suit of clothes for a midger which can fit only a giant, and which is rejected when made, can collect nothing for his work, either upon contract or upon quantum meruit. The plaintiff has done nothing for which defendant has authority to pay. He has not performed his contract."

In Texas, where the courts have held that a board cannot contract with an architect until the money for the payment of the building is in the hands of the board, an architect has been permitted to recover on a contract made previous to such time, but where the contract complained of was already executed.²⁰ Likewise, in Louisiana it has been held, in the case of an executed contract, that a board is estopped from pleading it was void because it was not in writing.²¹

In this same case, the contract with an architect provided for payment on the basis of a certain percentage of the total cost of the completed structure, plus additional compensation for extra services necessitated by changes in the plans. When the lowest bid exceeded the funds available, the architect was forced to revise his plans

accordingly. In an action to collect under his contract, the court held the architect was entitled to additional remuneration for his work on revising his plans, plus the stated commission applied to the actual cost of the completed structure, not to the estimated cost of the building he originally planned.

In Pennsylvania, where a school board contracted with an architect to prepare plans for an addition to a school building and agreed to pay him a 3½ per cent commission, it decided not to construct the addition when he had almost completed his plans and paid him \$2000 on account. About three years later it decided to construct the addition and employed another architect. In an attempt to recover under his contract, the first architect brought an action against the board. The court permitted him to recover the unpaid balance for the amount of work completed under his contract and fixed the amount by considering the estimated cost of constructing the addition under the plans he submitted. In this same case it also held that a legal contract with an architect not only is binding on the board that made it but is equally binding on successive boards.²²

In Kentucky, where an architect's contract with a county superintendent was allegedly ratified by the county board, it was held that the architect's recovery was dependent upon his asserting positively, in his allegation, that the ratification was in the manner and form prescribed by statute for the making of such contracts.²³

Amount of Recovery. Where a school board illegally breaches its contract with an architect, the amount of damages recoverable by the architect is frequently disputed. In this connection, courts are in reasonable agreement that the architect is entitled to recover the contract price, less any amount that has already been paid him, and less any expenses he would have incurred had he been permitted to complete the contract.²⁴

Summary. From a study of litigation involving architects the formula-

tion of the following principles of law relating to their rights, duties and obligations seems warranted:

1. The statutory authority of a school board to construct school buildings carries with it the implied authority to employ an architect.

2. In employing an architect a school board need not resort to competitive bidding. It may employ an architect of its own choice, and it may set his remuneration in terms of his training, experience and reputation.

3. Courts are divided on the question of whether a board may contract with an architect previous to the time the money for the payment of the building is available. According to what appears to be the best line of reasoning, however, a board may employ an architect even before the bonds have been authorized unless specifically prohibited from so doing.

4. In at least one state, where the courts have ruled that a board must have the money to pay for the building in its hands before it can contract with an architect, the courts have permitted an architect to recover under an *executed* contract made previous to that time.

5. A board may not, so it is generally held, contract with an architect to furnish plans for a building to cost in excess of the amount available for its construction.

6. If, however, the contract does not state the amount the building is to cost but simply states that it shall be "suitable," it has been held that the architect may recover even though the cost of constructing the building under his plans would run into an amount that would be in excess of the debt limit.

7. If, however, the architect is aware of the amount available and his contract calls for plans for a building that could be constructed for that amount, he cannot recover for his services unless the building he plans meets that specification.

8. Likewise, it has been held that where a contract with an architect has been completed, a board may not question its validity on the ground it was oral when it should have been in writing.

9. If a school board illegally breaches its contract with an architect, he can recover the amount of the contract less anything that has been paid him, and less any costs he would be required to incur if permitted to complete the contract. #

¹⁷*Altman v. School District*, 5 A. (2d) 896, 334 Pa. 336; *Sauer v. School District*, 90 A. 150, 243 Pa. 294.

¹⁸*Pierce v. Board of Education*, 125 Misc. Rep. 589; 211 N.Y.S. 788.

¹⁹*Laing v. School District*, 224 P. (2d) 923 (Ore.).

²⁰*Eldorado Independent School District v. Becker*, 120 S.W. (2d) 476 (Tex.).

²¹*Burk v. Livingston Parish School Board*, 182 So. 656, 190 La. 504.

²²*Altman v. School District*, 5 A. (2d) 896, 334 Pa. 336.

²³*Oberworth v. McCreary County Board of Education*, 121 S.W. (2d) 716, 275 Ky. 319.

²⁴*Sauer v. School District of McKees Rocks*, 90 A. 150, 243 Pa. 294; *Page v. Harlingen Independent School District*, 23 S.W. (2d) 829 (Tex.).

***It takes several years of teaching experience
before a person realizes that,
from kindergarten through high school and college,***

Teachers Talk Too Much

C. J. DINTELMAN

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TEACHERS talk too much. This is true from kindergarten through high school, but especially true in college classrooms, where professors drone endlessly on, day after day, in an unsurpassed flood of verbalism. In educational circles there is an old saying that "teachers teach the way they have been taught." If so, is it any wonder that so many of our teachers, fresh from college, talk the kids to death?

LARYNGITIS HELPS

It took me nearly two years of teaching to find out that I could develop more student interest and a far better learning situation in a classroom if I could just keep my own mouth shut. The amazing thing is that I might never have learned this at all if I hadn't come down with a severe case of laryngitis.

It seems to me that if we could give all our teachers a good, practical course in classroom activity technics, project methods and procedures, and group and committee processes—and then have them contract laryngitis for three or four days—we might have the greatest revolution in the classroom learning situation and the greatest boon to children in the history of education.

If one assumes, as I do, that we teachers talk too much, it is, perhaps, important to inquire why we talk too much. Aside from the sheer love of hearing our own voices, there is probably another more important reason. All too many of us forget that words are only the symbols for things and can never take the place of actual things. We must perceive that all language is about something *not* language and that words are symbols for things, not words. In most instances, a child

may be able to get a much clearer idea of a thing, and in a much more interesting manner, by observing, handling and experiencing than by being told about it by the teacher.

We spend too much time in telling, and what time is not spent in telling is spent in asking. And too much of the asking has to do with such questions as: "Did you do what you were told to do?" "Do you know what you were told?" "What was said?" rather than: "What have you found out about the nature of this thing? How does it work? What is it like? What can you tell me about it? What do you think about it? How do you feel about it?"

The implications are that more attention needs to be given to the whole field of communication. We haven't been trained for the listening side of communication as we have for the expression side. Little attention has been paid to skilled interpretation either of what is said or of what is observed.

Children come to school with a great deal of zest and spontaneity, a lot of native curiosity, and active interests. There is an eagerness for responsibility and a willingness for group participation. These are often considered child-like characteristics, but shouldn't they be retained? Would they not be good adult characteristics?

Somewhere along the line, though, we lose some of this eagerness, zest and curiosity characteristic of the child. Could it be that it is taught out of us? Could it be that the edge of zest and curiosity is beaten down and dulled with too much talking and telling, too much prejudging involved in our answers to children's questions?

Consider, for example, a typical conversation:

Child, picking up instrument in science room: "What is this?"

Teacher: "It's a barometer. Now put it down; you might break it."

This type of answer is a deadener and stops a child's curiosity in its tracks. It is all too typical of what happens repeatedly in our classrooms. Compare this with what the conversation might have been:

Child: "What is this?"

Teacher: "It is called an aneroid barometer. What can you tell me about it?"

Perhaps better teaching could take place if we would lead students to substitute simple observation for automatic judgment, to practice observation before talk, to make reportorial statements before judgment statements, and to describe and understand before reacting. Proper teacher response to many pupil questions—instead of a judgment type, initiative killing answer—might more properly be: "I don't know. Let's go find out."

MORE PUPIL REACTING, OBSERVING

We think pupils will learn by our much telling or by their memorization of rules and rules, words and more words. What we need to understand is that we don't necessarily know grammar because we have learned all the rules. We don't become good speakers by memorizing a book on elocution. We do not learn all there is to know about a territory just by studying a map of it. Even the best description of a thing does not define it exactly or acquaint us sufficiently with it. We are not automatically good navigators because we have memorized a map. Really to know something, we have to get out into the territory!

This, then, is a plea for more pupil doing, reacting and objective observing and for less of the initiative killing, judgment type of teaching. #

WHO'S WINNING THE TELEVISION BATTLE AT YOUR HOUSE?



D. K. WOODMAN

*Editor, News-Journal
Mansfield, Ohio*

"Thursday night used to be known as 'murder night' at our house because nearly every program was a crime show."

IT WAS "open house" night at all of the elementary schools in Mansfield, Ohio. I sat dutifully in my daughter's fifth grade seat, trying to adjust my hulk to the cramped desk space and still pay attention to what the teacher was telling us parents about her methods and how we could all help with individual pupil problems, when it occurred to me that the teacher really had a chance to say very little.

One of the mothers had remarked: "But I just don't know what to do about television!"

And that served as the pitch pipe for a chorus of varied complaints. You have probably heard them all; you have probably voiced some of them yourself.

At this point, one of the fathers remarked innocently enough: "My wife and I try to take advantage of TV as an aid to getting our youngsters to study."

A dozen fishy stares turned at once on this parental Pollyanna, but the teacher grasped the straw the man had flung into the maelstrom of complaints about television.

"How do you do that?" inquired the teacher, Eunice Neff.

"Well, first," said the parent almost timidly, "we use TV to get the kids to read."

"What?" exploded one of the mothers. "Ours won't even read comic books if they can have television on."

SELECT TV FARE

Patiently the father, Carl Goyne, explained: "If they want to watch TV, we make them get the evening paper and find in the front page index the location of the program listings. Then we make them go over the listings and pick out the programs they think they want to hear. Next they go through the program selections, reading them and telling us what each program is to be about. On this basis we select the evening TV fare."

"Huh!" snorted another of the fathers. "Our kids know by heart which programs they want to watch. They know the time and channel and the whole works. They even tell us what time to call them in from play!"

Mr. Goyne smiled. "We go through that, too. But we decided that our

household was not going to be run by a 21 inch picture tube. The youngsters caught the spirit of the thing, and now they know there's information to be had from a newspaper that is of interest and importance to them. Our youngest is even beginning to ask us to explain the headlines to her. She can read them, but she can't always figure out what the telescoped phrases of the headline writers mean. Some day I trust they'll even be looking at the editorial page. Anyhow, they are learning that reading has a practical value outside of getting a good grade in school."

Mrs. Neff indicated she thought this was a rather sensible approach.

A mother at the back of the room piped up: "That's all very well. But you can't tell me that beer and wine and cigaret commercials don't have an effect on children."

Mrs. Neff looked at Mr. Goyne, and he looked apologetic.

"I don't want to monopolize things . . ."

"Go ahead," said the teacher.

"Well, my wife and I talked about that angle, the commercials. We de-

cided that as youngsters grow up they are going to come into contact with smoking and drinking just as they will come to recognize the fact that crime exists as well as virtue. We decided here was a chance to make a point.

"We explained casually that announcers and performers were paid to give commercials, that it was like reading a part in a play. The best paid ones were the ones who made the commercials sound most convincing, but that did not mean they believed what they were saying—any more than that Roy Rogers used real bullets."

GET SOME FACTS

Mr. Goyne paused. "We were rather surprised at the results. We had painted ourselves into a corner, so to speak. Now, the youngsters insist on discussing with us the relative merits of *everything* they see advertised—not just beverages or tobacco. They say: 'Oh, he is being paid to say that. What do *you* think is best?' And there we are. They are making us sharpen our own wits and get some facts to present to them about consumer values."

While parents and faculty were having coffee and doughnuts in the cafe-

teria at the end of the open house, I cornered Mr. Goyne:

"Do you think there ought to be more stringent censorship by the Federal Communications Commission or a stricter industry code covering children's programs from the top?" I asked.

"In my opinion," he answered, "it wouldn't hurt if producers were required to reduce the amount of crime shown on TV, although they have improved a little bit. It used to be that at our house Thursday night was known as 'murder night' because virtually every major program was a crime show of some sort. That has not been entirely true lately. Maybe the producers and sponsors are finding that there are more real drama and interest in history and science and exploration, for example, than there are in synthetic destruction of a human life."

"Well, do you think TV has a bright future as a means of education?"

"Odd as it may seem," Mr. Goyne replied, "I think the possibilities of TV in education have been greatly overrated. The movies never replaced the classroom teacher, and the TV screen won't either."

"It's partly a matter of pace. When the teacher sees her pupils face to face she knows when she is getting her point across, when she can hurry along, or when she must slow down to explain something that has confused her class. The TV narrator or teacher totally lacks this advantage; he will never have it. And, since learning is a cumulative process, you can't build on facts that are only half understood or are misunderstood completely."

THOSE WHO COMPLAIN LOUDEST

"In other words, TV can be an educational aid but never a replacement for the classroom," I said.

"Exactly," Mr. Goyne sipped his coffee. "And one thing I feel strongly, to sum it all up, is this: The parents who complain loudest about TV are probably the ones who pay the least attention to their children. They recognize that it is an effective medium of entertainment and can have considerable effect on a growing mind, but they aren't willing to take the time to make use of its effectiveness in training their own children. It's as if they bought their kids jalopies and then complained that the youngsters didn't know how to drive." #

"What?" exploded one of the mothers. "Our children won't even read comic books if they can have the TV on."



OPINION POLL

Nepotism may sometimes cause trouble, but administrators see no need for a board policy forbidding employment of relatives

A nationwide sampling of superintendents' opinions by *The Nation's Schools*

EMPLYING a husband and wife, or other near relatives, in the same school system may occasionally cause trouble, but most school administrators (86 per cent) would be opposed to any policy prohibiting the practice. Only 7 per cent of those polled said their boards had such a policy.

However, considering the hypothetical adoption of this restrictive policy, 27 per cent felt it should apply only to members of the profession; 23 per cent believed that only nonteaching personnel should be so regulated, but 70 per cent said *both* teaching and nonteaching personnel should fall under the same rule.

Nepotism, or favoritism on the basis of relationship, seems to be the bogey man who isn't there, in the opinion of most superintendents. "Don't be silly," scolds an Illinois man. "Why use this ridiculous question to stir up controversy? Surely administrators and board members have enough judgment to perform properly without legislation. I have two top-flight teachers who are sisters."

And veterans of more than 30 years' experience in the schools chime in reassuringly: "I have never encountered this problem." "Very little nepotism." "I've seen no indication of it."

Many respondents believe that genuinely professional attitudes preclude trouble: "Under a professional administration, the danger of nepotism is limited." "This matter is always discussed with the individual before he is hired." An Indiana superintendent comments: "Nepotism in our schools is more alleged than real. My experience has been that schools suffer a distinct loss where fear of a taint of nepotism is greater than a desire for high professional services."

EMPLOY ON BASIS OF MERIT

A sizable group of readers stated firmly that employment should be based solely on merit, and relationship has no importance. "Pick the person who is best for the job," reads one simple recommendation. Excluding any applicant on the basis of relationship was described as discriminatory or un-

democratic. Speaking for this point of view, a Michigan administrator said: "Educational institutions are no different from commercial or industrial establishments in this respect. Prohibiting employment of such persons is a form of unfair employment practice."

Sagely, others pointed out that, where favoritism exists, it is not limited to relatives. "If it weren't relatives, it would be friends or political favorites," says a Pennsylvania superintendent who believes that a board policy about relatives would simply divert favoritism to other people. In fact, some suggested that relatives may have a harder row to hoe, because they really have to prove their worth and others may be jealous of them.

The specter of the teacher shortage made the whole question of restrictive policies seem mighty irrelevant to some hard pressed administrators, whose replies read like the classified section: "We can use husband and wife teams!" "We need teachers." However, many of those who commented on the teacher shortage indicated that necessity, rather than conviction, lay behind their willingness to hire employees who are related. Said one: "A good teacher is a good teacher, regardless of kin, . . . but in times of greater supply I probably would have a different opinion."

In the "dangerous, but" category, a number of superintendents pointed out that it's *whom* you are related to that matters. These superintendents would shun their own relatives and those of school board members. With these exceptions, they noted, there is little chance of nepotism.

On the other hand, minority opinion sees nepotism as a clear and present danger. An Arizona man who favors a policy to prohibit employing relatives says succinctly that this practice can cost an administrator his job. Relatives many times do not give their best efforts to the job, comments another.

In Oregon and Arizona superintendents said that state law forbids hiring of relatives. In Virginia, the school board is not allowed to employ any relative of any member of the school board or the superintendent. A Virginia respondent thinks this law is adequate.

Existing school board policies vary: In an Oklahoma town, the superintendent's wife may not be hired; in a Florida system, policy prevents the employment of a husband or wife to teach in a school where his or her spouse holds an administrative position.

EMPLOYMENT OF RELATIVES

1. Should school boards adopt a policy prohibiting the employment of any individual who is a near relative (husband or wife, son or daughter, brother or sister) of someone already on the payroll? Yes: 14% No: 86%
2. Does your school board have such a policy? Yes: 7% No: 93%
3. If adopted, should such a policy apply:

Only to members of the profession?	Yes: 27%	No: 73%
Only to nonteaching personnel?	Yes: 23%	No: 77%
Both teaching and nonteaching personnel?	Yes: 70%	No: 30%
4. What is your own general feeling about any real or alleged dangers of nepotism in school systems? ("Nepotism" is defined as "showing favoritism or the bestowing of patronage by reason of relationship rather than merit.")

BOSS OR LEADER?

*Theoretically, the superintendent
occupies a contradictory rôle*

JOHN P. MILLIGAN

Assistant Commissioner of Education for New Jersey

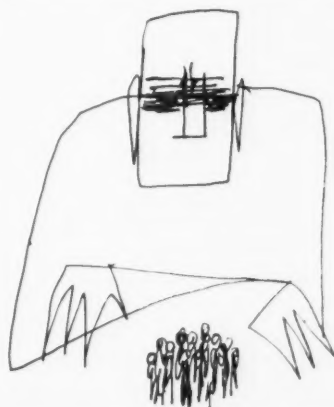
SOME 10 years ago a highly respected superintendent retired. At his last meeting with his fellow superintendents in the county he was asked to make some remarks. He did. He was not retiring, this superintendent said, because he was old or lacked energy, but rather because school administration in the coming decade called for skills he did not possess.

His training had prepared him to act as the boss, to give orders, to see that they were carried out. Although he hoped he had been considerate of teachers and others in the employ of the board, he had never had any doubt that they were working for the board of education and were subject to his direction. He realized, he went on to say, that the pattern of superintendent-employee relations is changing; that the trend is toward cooperative planning; that the superintendent of the future cannot look upon his task as that of "bossing" others. Rather, he must think in terms of leadership of an effective team. This, he concluded, is good, and young administrators have a splendid opportunity to meet the challenge of the new leadership.

While those who knew him doubted his lack of ability to adjust, the years since have shown his analysis of the trends in school administration to be substantially correct. Not that the way is clear. Many superintendents who wish to create the team spirit are finding it difficult. Some, perhaps, have not thought through the implications of democratic administration.

Lip service to democratic administration. Some administrators really do not believe in the theory of democratic administration. They practice it

with respect to some matters they don't regard as important, but when the chips are down, they revert to the "boss" idea. There may be a good explanation for such behavior on the part of the administrator. The explanation may lie in the fact that few of us—board members, administrators, teachers, other personnel—have yet comprehended the full meaning of democratic administration. Hav-



Superintendent of the future cannot think of his job as "bossing others."

ing failed to comprehend it, we have not, of course, developed the skills necessary to practice it.

Whom does the superintendent represent? Salaries of school personnel present an ethical problem deserving primary consideration. Obviously, an administrator desires the best possible salaries for school employees for at least two reasons: (1) Satisfied employees work better. (2) As other employees' salaries go up, the administrator's salary goes up, too.

One superintendent stands by the policy of supporting the teachers and other employes in their annual salary request whatever that may be. When he was a candidate for his present position, he made it plain to the board of education that this would be his policy. He argues that his function is chiefly that of improving instruction and that to oppose teachers' salary requests or to help water them down would weaken or destroy his influence as a supervisory leader with the staff.

Fortunately for him his board accepts that view and accepts responsibility for working with representatives of the local teachers association in the annual salary agreements. The procedure seems to work well in this community. There seems to be nothing objectionable in it from the ethical standpoint, as this superintendent made his position clear from the outset.

Another superintendent made it plain to the board before accepting an appointment that he would expect the board's cooperation in establishing a salary program equal to the best. The board agreed but indicated that dependence would be placed upon the superintendent to work with teachers, community groups, and city officials to effect such a program. Under this arrangement, life was not so easy for the administrator. He discovered that the teachers association was not unified when it came to the salary question. Some teachers were in favor of asking for more than they could reasonably expect on the theory that the board would cut whatever request was made. Others among the teachers thought, with the superintendent, that the sal-

any request should be reasonable, realistic and supported by cold facts.

In this situation, the superintendent became, in effect, the board. He was (and rightly) excluded from teachers association meetings and membership, so that he knew only what the teachers salary committee told him and what came through the grapevine. On one occasion the teachers salary committee laid before the superintendent what was to him an impossible request. He tried to reason with the committee members, but they said their hands were tied by an association vote. As far as he could see, there was nothing to do but to present the request to the board—without recommendation. It was refused, and, furthermore, the board was so incensed at the unreasonable request of the teachers that the increases for the coming year were reduced.

The superintendent went before the association, informed the teachers of the board's decision, and offered to tender his resignation if the association members would indicate by a majority vote that his leadership was at fault. The result was, to him, amazing. Large numbers of teachers came singly and in groups to reassure him, to say that the teachers appreciated his efforts, that they were solidly behind him.

"What, then, is the explanation of this obviously unreasonable request?" he asked. The explanation was this: There were in the association a few older teachers who, in the years before the existence of salary schedules, had got, by one means or another, their individual salaries to unusually high levels. At the time they were still above the maximums of all neighboring communities. To please them, the association had voted for what were obviously impossible increases, regardless of the effect upon the board and upon the community.

Are teacher groups manipulated?

I wonder if some teachers associations are not subject to manipulation by a determined minority. It seems clear that teachers in their associations ought to think as individuals and vote on questions according to the dictates of their individual consciences. If they do not, it becomes an ethical problem of considerable moment, and the rôle of the administrator is hard to discern. If he tries to discuss the ethics of the matter with individual teachers, he may become subject to the charge that

he is practicing coercion. Perhaps his best move is an inservice program of study of professional ethics, along with curriculum study.

Then there is the matter of payment of equal salaries to men and women teachers. The idealistic answer seems to be that a person should be paid for the job he does. This, of course, means equal pay for men and women. But the question immediately presents itself: What about the man with a family? What about the woman teacher who has dependents?

Are dependency allotments fair?

One answer to the problem emerges—dependency allotments for the man or the woman. Admittedly any dependency allotment plan will give money to greater numbers of men teachers than women teachers, but it is equitable in that it applies equally to all those having dependents.

What stand is an ethical one on the question of dependency allotments? The National Education Association, in one statement, straddled this question nicely by suggesting a list of principles, some of which were contradictory to others, and wound up with this:

"Whatever balance is made among these various principles, one conclusion seems inescapable. Unless teachers—women and men alike—can maintain themselves and their dependents in dignity, on a plane of living that provides for cultural growth, the children in the schools will be less well taught than they would be if salaries of teachers made a professional standard of living possible."^{*}

What about the young man, perhaps a veteran, with five years of experience, a wife, and two young children? His salary may be as high as \$5000. Is this enough? Surely not. Thus, we arrive at the only conceivable ethical position: Either we are for a salary of \$6000 to \$7000 after five years of experience (and what possibility of such a figure exists?) or we must be for some plan of dependency allotment which will enable the man (or the woman) with dependents to face his class each day with his bills paid, or at least with the prospect of paying them.

Professional growth for every teacher. In any school or school sys-

^{*}Salary Scheduling, Discussion Pamphlet No. 8, National Education Association, Washington, D.C., December 1949, p. 18.

tem worth the name, the staff is active in curriculum study and instructional improvement. Such activity is usually carried on by teachers after school hours. Occasionally, a day is set aside when students are dismissed and the staff meets for curriculum study. The movement toward workshops for teachers before the opening of the regular session in September and subsequent to its closing in June is growing. Release of individual teachers to attend workshops during school hours or to do other curriculum work certainly seems desirable.

Curriculum study in well planned workshops does promote teacher growth. But the basis upon which successful workshops proceed is the "problem" of the teacher who comes voluntarily to the workshop to get help in solving her problem. In one school system where 300 teachers are employed, a vital curriculum program has been in progress for some time. The program is based on the workshop approach. The superintendent noted, however, that while the number of participants varied each year a considerable number of teachers failed to participate at any time.

The superintendent asked himself this question: What is my responsibility for participation of *all* teachers in curriculum study? He discussed the question with colleagues, both in and out of the school system. His final answer emerged somewhat as follows: The superintendent should seek to have all teachers engage from time to time in curriculum activity. At the same time, there are two objections to requiring such activity. The first is that involuntary activity on the part of the teacher will not accomplish the result desired. The second, and perhaps the overriding, objection is that an unwilling workshop participant will destroy in some measure the esprit de corps of the study group.

Force is not the answer. Is persuasion effective? The superintendent discussed the problem with his principals, asking them to share with him the responsibility of encouraging all teachers to participate in curriculum study from time to time. He then went over the record of each teacher with the principal and sought to find means by which the unwilling teacher might be persuaded to give the voluntary program a try. In many cases the principal was successful. In other cases, teachers simply failed to volunteer,

and the superintendent hewed to the line that the successful workshop program must be voluntary. Thus, he was forced to settle for this: A small number of teachers cannot be persuaded to participate in voluntary activity.

However, there are other means of involving teachers in curriculum activity. The administrator has an obligation to employ these means to draw in those who are not sufficiently interested to volunteer. One such means is the appointment of committees of teachers to study and make recommendations concerning teacher evaluation; to prepare courses of study and outlines; to prepare bulletins on various subjects. The number and variety of such projects are adequate to enlist the activity of all teachers. Under a carefully selected chairman and with an otherwise professionally minded committee, even the uninterested teacher has some prospect of profiting by such participation.

In schools where principals themselves are good curriculum leaders, much can be accomplished when the principal requests the lagging teacher to work directly with him on some project of value to the school program.

The administrator's responsibility in the curriculum study field is threefold:

1. He should make it possible for teachers to associate themselves voluntarily in the study of their common professional problems.

2. He should attempt to persuade—not coerce—teachers who at first do not volunteer to "give it a try" in the hope that they may, by becoming involved, become interested.

3. He should assign any remaining laggards to specific curriculum study activity. This last may be done, it is believed, so quietly, effectively and infrequently that it will not become too obvious. It would be harmful to the voluntary program if the word got out that one had better volunteer for easy workshops or take a hard committee assignment. Faced with such a prospect, the administrator would be justified, in my opinion, in letting the few laggards lag.

Who should evaluate the probationary teacher? The primary distinction the administration should make in considering teacher evaluation is that between the probationary and the permanent teacher. Whether or not the permanent teacher acquires

legal tenure by state law after the probationary period, the principle remains the same. There should come a time when the teacher is looked upon as one whose services to the school and the community are such that there is no longer any question about his permanency in that community. I use the terms "nontenure" and "probationary" and the terms "tenure" and "permanent" synonymously.

In most communities at the present time evaluation of the nontenure teacher is the responsibility of the chief executive of the school system. He may delegate this responsibility to principals and/or supervisors. He may make use of various evaluative criteria, but, when he makes his recommendation to the board to keep or to dismiss a teacher, he should have assured himself that the person has had a fair appraisal by responsible and competent appraisers. If his recommendation is that the teacher be continued, he should be assured that the children are getting the best available; if he is recommending dismissal, he should be assured that the evaluation is fair to the person being dismissed.

In my experience, any formal evaluation of nontenure teachers by other teachers has not been found practical.

Sometimes when the superintendent and some teachers are friends, charges of favoritism are made.



Teachers seem not to want to assume such responsibility. In theory, teachers who have gained permanent status in their profession ought to be jealous to see that none who are unworthy are admitted. Conceivably, they should seek the elimination of incompetent teachers as zealously as the administrator himself. Teachers do not seem to reason thus. Their loyalties are to individual teachers, good or bad, who are their friends. This precludes, from their point of view, their sitting in judgment upon their peers.

The prevailing practice, then, is for boards of education to accept (which they usually do) or reject (as they occasionally do) the recommendation of the chief executive on the employment of teachers. His responsibility, therefore, is very great. In times of adequate supply of teachers, he should feel responsible for admitting only the best to permanent status. In times of shortages, he should feel obligated to admit to tenure status only the best teachers he can obtain. He may use all the help and advice he can get, including informal conferences with trusted teachers, but the final responsibility for recommending only the best teachers available is his and his alone. On his judgment, wisdom and in-

regrity, therefore, depends the quality of the teaching staff.

Evaluation of tenure teachers is a joint responsibility. There are those who contend that, where legal tenure has been acquired, evaluation serves no purpose because, unless the teacher can be proved to be conducting himself in ways "unbecoming a teacher," there can be no dismissal. One answer is, of course, that in stable or expanding economic periods increments and adjustments may be withheld. Such action presumably would cause a lagging teacher to do his best; on the other hand, it might cause him to do his worst in ways that could never be proved even if discovered.

Apart from evaluation for the withholding of increments, and admitting that this is a questionable argument for evaluation, there are other arguments for the evaluation of tenure teachers. It may be argued that a proper program of teacher evaluation will promote teacher growth and that teacher evaluation of some type is called for in terms of public relations. What is the answer to the interested citizen who asks: What means do you use to appraise the work of tenure teachers? Is it good to say: We use none; we let them go their own way? This answer will do the schools no good.

We should be in a position to say that we have a program of teacher evaluation worked out cooperatively involving conferences among teachers and supervisors leading to the establishment and achievement of goals that will enhance the educational opportunities of the community.

Before proceeding, let us get the "tenure mistake" out of our hair. There are those teachers who, having gained tenure, have deteriorated to the point where they are ineffective, yet charges cannot be lodged against them. How shall we handle them?

These suggestions seem in order. In the first place, continue to work with them, using the best known supervisory technics. If they are sincere and are trying, give them increments; otherwise they may do worse. If they are not trying, it may be well to try withholding increments. To do so, however, is to admit to the board that a mistake has been made; it is, indeed, to call into question the whole tenure plan.

I regard tenure as essential to good teaching. If it is necessary to give

increments to a few laggards in order to maintain tenure for teachers, then so be it. We are actually discussing here a negligible percentage of teachers.

The evaluation of tenure teachers, then, should in the main be entirely divorced from the salary program. The criteria of evaluation should be set up by committees including—nay, predominantly made up of—teachers. Evaluation procedures may be quite simple.

In one school system, it is as simple as this: At the beginning of the year, the principal meets with each teacher in order to prepare with her a list of goals or objectives for that year. Often the teacher's goals include certain activities—standardized achievement test comparisons, for example—which require participation by the principal. At the end of the year principal and teacher discuss the degree to which the goals set forth early in the year have been achieved.

Teacher performance can be evaluated in ways that will stimulate teacher growth. Unfortunately, most school systems are not using them. Recently I asked 11 teachers from 11 school systems, all considered to be good, what the evaluative plan in their school system is. Three did not know whether there was one; six knew they were rated and that the rating was filed, but did not know how they were rated; one had been told his rating without other comment, and one had had the opportunity to discuss his principal's appraisal of him.

With all that is known today about cooperative endeavor on the part of teachers and principal/supervisors, it would appear that administrators have the obligation to develop, with the tenure teachers, an effective plan of evaluation aimed at stimulating professional growth.

Is the superintendent "boss" or "leader"? The usual connotation of the term "boss" seems to indicate that the most an employe should expect from a boss is a distant cordiality. In many, many instances this notion of "distant cordiality" is far from rep-

resenting the relationship between the school administrator and the teachers. In some instances real friendships have developed, and in some of these situations there have been whispers of favoritism in assignments and in promotions. On the whole, however, the relationship may be defined as friendly and wholesome.

This more cordial relationship in schools may be explained, perhaps, in the similar educational levels and social status of teachers and school administrators. Even the financial differential is not great. (I have heard teachers remark that they would not consider a principalship with its extra responsibilities for the small additional salary increase.) It can be said truthfully that personal relationships between school administrators and teachers usually follow the Golden Rule.

Vague understanding of administration. If any change in these relationships seems called for, that change might be in the direction of a greater understanding of the complexities of the administrative task by teachers individually and, consequently, a greater degree of sympathy on their part.

In a New Jersey community a few years ago, the superintendent was working hard to improve teachers' salaries. The procedure was one that involved secrecy on his part because approval from both the board of education and city officials was required. Thus, for a period of several weeks, the superintendent could only report that the matter was under consideration. Many of the teachers openly criticized him for doing nothing. When the salary plan was at last approved, it was received enthusiastically by all the teachers, but it is not recorded that any of them openly praised the superintendent.

It must be said that the rôle of the school administrator is predominantly that of leader of a professional group. At the same time, he is the executive officer of an employing board. In his rôle of professional leader he must stimulate, guide, encourage and inspire. In his rôle of executive, he must decide, govern, hire and fire. Obviously, these two functions are at opposite poles in human relations, and the superintendent frequently finds himself "in between." The amazing fact is not that superintendents do so poorly but that they do so well. They occupy effectively a theoretically impossible position. #



Follow the Golden Rule

PROJECTS FOR PRINCIPALS

Davy Crockett

"AREN'T THERE any new school projects in the world?" asks an anguished superintendent. "Ever since that can of beans from the grocery store project fell on my head and I broke my leg on the sand table, I seem to have lost a little of my enthusiasm for the project method."

Do not despair, sir. Despite present-day disagreement over sand tables, the project method still flourishes and will continue to clutter up your classrooms as long as school supply companies furnish abbreviated post offices for immature moppets at cut-rate prices. Your remedy is to modernize your projects.

Why not try the Davy Crockett project, for instance, which can be outcomed to deglamorize history, foster musical appreciation (of a sort), and encourage physical activity, gunmanship and knifemanship as well as advertise vocational guidance? Such a project will also help to dispose of excess merchandise now languishing on the shelves of local merchants, and what more do you ask of any project?

Specific details for a Crockett project are of necessity vague because they haven't yet been published in the how-to-do-it trade journals, but the resourceful teacher will undoubtedly discover infinite possibilities. Possibly, the school could feature a display of scalping knives and other lethal weapons with which doting parents now arm their offspring. This would help to legitimize the extracurricular activities which have so be-Crocketted the playground director since Davy entered recent history. Or maybe the children could be given a day for tree carving and thus save desks from annihilation, or in a gentler mood, a songfest might be planned to bring back memories of the old singing school. The theme song could be parodied to include the exploits of the principal or prominent members of the board of education, but it must be recognized that some small danger lies herein unless the parodies are well censored in advance.

As a great activity climax, all the coonskin caps in the district could be collected and burned at a communal bonfire, thus saving the raccoon family from early extinction if it is not already extinct. This would easily lead into a project on kindness to animals and start the whole vicious circle all over again. For a finale at the bonfire,

Chalk Dust

FREDERICK JAMES MOFFITT

Chalk Dust (right) presents a superintendorial pen set to Robert K. Bair, director, New York State Citizens Committee for Better Schools, while David B. Dreiman, the author of "How to Get Better Schools," looks on. The pen is guaranteed to perform under the waves or up in the air, where superintendents usually are.



the principal could perform on that old banjo he played in the college glee club, and he would thus make friends and influence people. Funnier strategies than this have been advocated by our public relations people.

Sour-faced historical researchers are suggesting that maybe Davy has been overadvertised and overplayed, but when in the world did a successful projecteer ever let dull facts stand in the way of a first-rate project?

« »

SAVING LITTLE JOHNNY

THE PHONY WAR over little Johnny's reading ability has reached the point where it is giving the poor little fellow a terrible inferiority complex. Naturally, he can't help reading the arguments that appear in the daily papers or taking a peek at the confidential worry memorandums from the principal to the teacher. The teacher, who has been caught with her phonics showing, is likewise embarrassed.

There are two constructive courses which might relieve the situation: (1) The teacher could eliminate the English alphabet, which, after all, is only a mean old hand-me-down from earlier cultures. In place of English she could substitute the Himyaritic language, which has 29 letters and no vowels at all. In this way she would get rid of the troublesome English vowels, which are uncouth at best. This Himyaritic grunt and groan system is

more logical, and the spelling therein is practically all guesswork, so this would automatically abolish the teaching of spelling, too, which some folks think was abolished long ago and good riddance, say I. (2) If the superintendent is a phonic and objects to Himyaritic, let the teacher replace English with the Laubach system, which is done completely with phonetic picture charts and the victim reads by associating symbols with sounds. Dr. Laubach doesn't bother with the ABC's at all, which is helpful.

True, some old fogies may object to this elimination of English, but they are the very ones who have been complaining loudly that English is no longer in the curriculum. Of course, there will have to be a period of adjustment, but this may be filled in by using be-bop, which will probably annoy the phonicians no end.

Whichever method the teacher decides to use will satisfy one side or the other, and she won't be left dangling where she is, dmd if she duz and dmd if she don't. It is high time that the inconsistencies in the English language wished on us by our ancestors be replaced or, at the very least, cleaned up a little bit.

« »

SEPTEMBER

*What happened, I can't remember,
How June changed into September.
And now to my complete amaze
I face a year of Labor Days.*

BUSINESS ADMINISTRATION

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There's No Excuse for Conflict Between Maintenance and Instruction

GORDON E. HARAM

Secretary-Treasurer, Public School Board, Ottawa, Ont.

IN A school in which the teacher is also the caretaker, there obviously is no conflict between the educational and maintenance staffs. But in any school system where these activities fall to separate departments, there is likely to be a problem. How shall the schools' always limited funds be divided between the two? How can the administrator persuade staffs of the two departments to cooperate?

In some cases, a good deal of friction develops from the apparent conflict of interest between the two groups. One may be concerned primarily with protecting the public's great financial investment in school buildings and equipment. The other may regard teaching as the all-important part of the school's work. Which is right? Or is there a position somewhere between the two?

These questions can be answered by giving heed to one basic fact, namely, that the school system exists to educate the children. School buildings are designed, maintained and operated for one purpose only: to provide adequate, comfortable and healthful accommodation in which the teachers can carry on their work. Obvious? Certainly. But it is a point we often fail to consider. When we are charged with protection of the taxpayers' investment—possibly a matter of \$10 million in a medium-sized city—we are likely to consider maintenance of plant only in terms of guarding this investment.

Based upon an address given at the 41st annual meeting of the Association of School Business Officials in Chicago.

Operation becomes an end in itself. This is a mistake. Maintenance and operation are only services to a greater cause—education. Failure to recognize this truism is, in my opinion, the source of friction where it exists.

The school board can save itself much trouble when it comes to budgeting if it uses this fact as a guiding principle. Budgeting is never an easy matter. Generally the school board does not have enough money to keep both maintenance and instruction at the high level it desires. The board is usually under extreme pressure to keep down costs. Taxpayers plead for lower levies, and the schools too often furnish a convenient area for so-called economy. In some communities the municipality actually has the power to reduce school budgets. In others, it brings about reduction in school income by blaming the school board for high taxes. In either case, the net result is that the board faces the dilemma of sacrificing either instruction or maintenance to keep within its income.

MAINTENANCE SACRIFICED

During periods of retrenchment, some school boards try to keep up standards by giving the major part of the funds to instruction and letting maintenance suffer. Our own school system learned the hard way that this is not a wise policy. During the depression of the Thirties, our schools lacked sufficient funds to carry on both educational and maintenance work properly. The authorities therefore sacrificed maintenance. At one time main-

tenance funds were cut so low that we were maintaining and operating a \$6 million plant of 21 buildings for only \$10,000 for the year. The deterioration of our buildings, as a result, was terrific. The war years that followed the depression enforced a continuance of inadequate maintenance because materials and labor were so hard to get. Now, a quarter century after the depression, our superintendent of buildings is still handicapped in operating a regular maintenance program because of the excessive replacements that were made necessary by the deterioration during those lean years.

In situations like this, as in more normal times, the right thing for a school board to do is to strive to strike a balance between the amount of its limited funds that can be spent on instruction and the amount to be devoted to maintenance and operation. Both are necessary. There is no use providing an elaborate plant and keeping it in first-class condition if the board cannot afford good teachers to carry out the instruction program. On the other hand, the policy of setting aside all the funds necessary to hire good teachers as a first call on the budget is not good enough. It is poor business to hire expert teachers and expect them to do a first-class job in rundown buildings supplied with broken-down equipment. A good teacher does his best work in a plant that is well maintained and operated, just as a school plant that is well maintained and operated is put to its best

use only when it is staffed by excellent teachers.

There's another reason why funds should be fairly apportioned between the two departments: To get good caretakers, like good teachers, a board must pay adequate salaries. The effect of the personality of the school caretaker and staff on the children of the school should not be overlooked. If you recall your own school days, you will probably remember the caretaker just as you do your teachers. If he was a kindly, capable, intelligent person, you will recall him with appreciation. But if he was irritable and inefficient, you will remember that too. It is important for the welfare of the children that the best type of persons available be employed on the caretaking staff.

The school board's responsibility, therefore, is so to allot the funds that neither the quality of the instruction nor the type of maintenance and opera-

tion will suffer. But others besides the board have a duty to perform in coordinating instruction and maintenance services, and that duty is not financial but administrative. Officials heading the various school departments—instruction, business, maintenance—must work together as a team. An "empire builder" in any one of the departments can upset the balance. Here again, the different functions will attain their proper equilibrium if the head of each department remembers that all have the same goal—the best educational program for the children.

Coordination does not end with the administrative officers, either. It must be carried right into the classrooms and corridors. Problems may arise because of the fact that two types of work are involved, and members of one group often annoy the others. Teachers, for example, may be unreasonable in what they expect from care-

taking staffs, or they may be untidy in their rooms. Caretakers may be either inefficient or too efficient, careless or too concerned with the appearance of the building. Irritation results. The fundamental cause of such friction is failure to realize that each is doing a part of the same job. A good principal can do much to bring this concept of unity of purpose before all members of the school staff. He can do it, however, only by understanding himself that the goal of all work in the school is the education of the children, and by showing this understanding in his attitude to all school personnel.

Thus examined, the problem becomes simple. There is no real conflict between instruction and maintenance. All the work done in the school is part of one great undertaking—the education of our boys and girls. When this is seen, friction ceases. #

Training Custodians for School Care in an Industrial Arts Course

FLOYD G. HOEK

Secretary-Business Manager, Board of Education, Asbury Park, N.J.

CUSTODIAL service is honest labor; it is no ordinary job, to be done by an ordinary human individual. Such a job does not exist unless one makes it ordinary. Clothe this work with a spirit of enthusiasm, honesty and surety of purpose, and the custodian will begin to live in his work. Our ever changing concept of education and its new requirements of man will definitely affect the standards of custodial service.

School custodial service has been, and is being, done by those who have been political appointees, who, through sheer necessity, accept this form of work, or, possibly, who, because of interest in the work, have taken this type of employment. A survey of these employees will show that the great majority have had no training in this field, nor have they completed secondary education. School custodial service

seems to be somewhat of a taken-for-granted job by an almost forgotten man, whereas this man should have proper training through educational institutions. It is most imperative that a new approach be substituted for the present situation.

The secondary school (through its industrial arts division) should, I firmly believe, be the source of training for the position of school custodian. Educators have concentrated upon the superior child, the handicapped, and many others, but not upon those who, by nature, are most suited to custodial service. Educators desire only those of a "school" background in the various positions connected with an educational system. Then let us explore the possibilities of training those who would make useful and able custodians of billions of dollars worth of school plants.

Inservice training and custodial schools attended for a short time during summer sessions are just a token of the real training program. These means of preparation have some value, but what is needed is a long basic training period. Custodians should have at least a secondary education or experience equal to it, be required to spend a certain time as an "intern" and then, upon completion of the course, be given a bona fide certificate as a license to supervise and care for valuable taxpayers' property, which is our children's home during the day.

This course of training might, for example, be called, "Training for Building Care," and should, I think, be an integral part of an industrial arts program. It should consist of such "subjects" as:

1. General repair of electric motors, lights, automotive equipment, plumb-

ing and general carpentry: locks, doors, desks, door closers, furniture—any repair that could be done by the average man.

2. Heating and ventilation: general knowledge and efficient operation of oil burners, gas furnaces, and coal furnaces; importance of and principles involved in heating and ventilating; thermostats; condensation and return pumps, and traps.

3. Study of tools: the making of, caring for, and handling of various custodial tools; tools considered essential for the job: hand, power, additional equipment.

4. Operating building equipment: knowledge and operation of equipment for building operations.

5. Operating building supplies: study of the kinds and qualities of these supplies, such as soaps, floor seals, waxes, cleansing compounds.

6. Maintenance supplies.

7. A knowledge and general repair of the various kinds of floors, such as types of wood, asphalt, tile, terrazzo and others.

8. Metal work — the prescribed course for industrial arts.

9. Air conditioning operation. The use of air conditioning seems to be a new trend in the school building of the future.

10. Personal relations course: the custodian's rôle in the total school program; the custodian's relationship with children, faculty, parents, administrators and fellow custodians. He must, in character, habits, language and general demeanor, be equal to association with all these persons.

11. Fire precautions.

This program of study is one for the additional utilization of the regular industrial arts program, thereby offering to those so inclined an opportunity to qualify for custodial service, preparation for good citizenship, and development of personality. It is for those who need a general training in custodial service and not a training for specialization such as could be found in the vocational school.

Instructors, I am sure, would be willing to meet this additional challenge of preparation in these few new areas of study.

With all of this there should, naturally, be a higher standard of living and, to make this possible, proper monetary returns. Custodial care will become a specialized vocation, a change brought about by the use of modern inventions of tools of

work. The idea, and term, "janitor," is no longer considered good taste or practice.

This all may seem remote and "far-fetched," but I am sure that in the

near future citizens will demand that the school custodian be educationally trained and come up through the line of instruction with a basic idea of school care. #

Good Supervision Means Good Maintenance

A. D. BRAINARD

*Deputy Superintendent in Charge of Business and Finance
Public Schools, Dearborn, Mich.*

CAN supervision be as helpful to the school employes who clean, maintain and repair the plant as to the teaching staff? Experience shows that it can, but sound practices are just as much needed in directing the activities of custodial workers as they are in supervising the teaching staff.

Those employes who are responsible for keeping the physical plant in proper condition for pupils and faculty may not write degrees after their names, but they react to supervision much as educational staff members do. Autocratic supervision is no more successful with them than with teachers.

Supervision of non-instructional employes should seldom, if ever, be arbitrary or authoritarian. If it should seem wise in an emergency for a supervisor to issue orders, he should at the earliest possible moment explain the principles underlying his action and seek to convince the employes of their soundness. At the same time he should assist the workers in enough other applications to start them forming the habit of self-help by reference to fundamental principles.

In working with non-instructional employes it is well for the person in charge to keep in mind certain characteristics of good supervision agreed upon by most authorities in this field.

First of all, supervision should be concerned primarily with the goal—the job to be performed. It should not, as a rule, be occupied with the details of a particular assignment.

It must be patient. It should begin with conditions and practices as they

are and move on from that point gradually, progressively and persistently; there should be no nagging. Supervision should take into account the capacities and attitudes of employes, and even their prejudices, seeking always to stimulate their growth and development. It should always be accomplished by assisting the worker to understand the job, never by "pulling rank" and enforcing unreasoning obedience. Always it should be kept simple and informal, free from elaborate machinery.

The work of the supervisor falls naturally into four categories: (1) selection and revision of objectives; (2) instruction of workers in the use of materials and in methods of performing assignments; (3) development of the workers themselves, and (4) evaluation of the tasks performed.

Supervision should start with a plan. This is a very important part of the whole job and should be done with great care. Before attempting the draft, it is a good idea for the planner to become familiar with the best thought and practice in this field. He can do this by reviewing available literature on the subject and also by finding out what other schools are doing.

The next step is to block out, in chart form, the plan itself—one which will effectively meet the basic requirements of the particular school system. This requires a determination of the various zones or levels of management and the agencies that are to handle them. A good general organization chart, with auxiliary charts for each major division, is an essential first step in the analysis, clarification and

Adapted from address to the Association of School Business Officials, October 1955.

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understanding of any organization plan. Indeed, the process of charting the organization is one good test of its soundness, as any relationship that cannot be readily charted is likely to be illogical and therefore confusing.

When it is completed, the plan should be tested from a wholly objective point of view, without consideration of precedent, tradition or present pattern. Then it is well to compare the new plan with the one in current use, noting and classifying changes needed to achieve the ideal pattern. The proposed changes are then placed

in two classifications: those to be undertaken at once, and those that can await a more opportune time.

After the organization structure is planned, the next thing to do is to clarify and define the essential specifications and requirements of each level of management, each department, each job or group of similar jobs. This paves the way for writing standing orders covering the details of each employee's work.

The task of analyzing individual jobs is one of major importance and deserves the most careful study. The

job analysis must be regarded as a perpetual inventory, creating, absorbing and revising classes as the need arises. If so handled, it becomes an aid to good administration, facilitating a common understanding of jobs by administrators, supervisors and employees. It expedites budgetary and payroll activities and clarifies recruitment, promotions, transfers and related personnel transactions.

It may be helpful at this point to tell just how we in the school system of Dearborn, Mich., have handled job analysis. We regard it as essentially an inventory of the duties and responsibilities of the many positions in this field. To simplify analysis, we have grouped all positions that are basically the same in respect to type, difficulty and responsibility for work performed and for training and experience required.

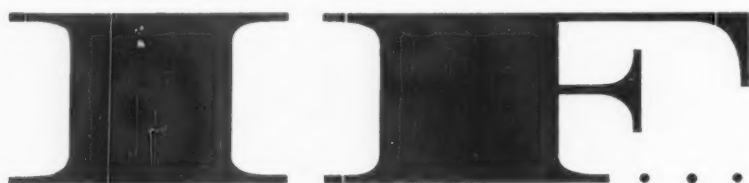
EACH JOB DESCRIBED

In determining job classifications, we analyzed each position by sending questionnaires to all employees. These forms provided an opportunity for both the employee and his supervisor to describe the duties and responsibilities involved in each position. Our staff then proceeded to assemble, analyze and compare the filled-in blanks. If anything concerning the duties of the job was not clear at this time, I, being in charge of supervision of operational and maintenance personnel, took over. I interviewed the supervisor and many employees concerning the duties in question so that a complete and clear description could be achieved.

When the job analysis was complete we had: (1) a class title, (2) a definition of the distinguishing features of the work, (3) a list of duties involved, (4) a statement of the supervision received and exercised, (5) a list of desirable qualifications for successful performance of the work, and (6) a statement of desirable education and experience for new appointees.

We took care to write our job descriptions so that they would not limit the activities of any employee. We regard job analysis as a description of a current situation only, not as a final statement. In most school systems, positions and functions are constantly changing. Job descriptions, therefore, must also change if they are to keep abreast of changing requirements. Ours are highly flexible statements.

After the job is analyzed, it becomes a simple matter to prepare a written



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guide for each worker on the job. These guides may be in the form of mimeographed standing orders which outline the duties of each worker. The original order should be supplemented or revised as new situations arise or as conditions change. These standing orders can prove a major factor in the smooth functioning of an organization for they set the policies that govern all employees in routine daily work and even in emergencies.

SERVICE MANUALS PREPARED

Some school systems are finding it worth while to write service manuals for non-instructional jobs. These are especially useful in periods of short labor supply when untrained, inexperienced employees must be absorbed as rapidly as possible. No matter how thorough the training program, there is seldom time enough to make absolutely sure of each employee's knowledge of the building and his job.

The value of manuals is often overlooked because the duties of most operational and maintenance employees appear simple to the supervisor. To the new employee, however, the operation which to the experienced worker seems the most natural thing in the world may be completely baffling. A well written manual can be a most helpful guide to the newcomer.

Among the best of service manuals now in school use are those that combine special instructions to the individual worker with general rules that cover almost all tasks confronting a school operational and maintenance employee in the regular course of his job. As a result of receiving this type of instruction, the newest employee can determine, almost at a glance, just what each other employee does, to whom he reports, and just what the limits of his responsibilities are. For under each classification the manual fixes the line of authority, designates the source of instruction, and specifically defines the duties assigned to the classification.

All these supervisory methods and devices are aids to good maintenance and operation of the school plant. It may seem that by using them we are giving a great deal of attention to simple tasks. Yet can it be said that this is an undue emphasis? Whatever contributes to the smooth functioning of our schools is doing much to help achieve the purpose for which our schools are organized—the education of children, youth and adults for citizenship in American democracy. #



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- OHIO**
Acoustical Contracting & Supply Corp., Cleveland
Cincinnati Floor Company, Cincinnati
Riethmiller Acoustic Company, Columbus
- OKLAHOMA**
Denman Floors Company, Oklahoma City
Midwest Marble & Tile Company, Tulsa
- OREGON**
Commercial Tile Company, Eugene
R. L. Eifstrom Company, Salem
Johnson Acoustical & Supply Co., Portland
- PENNSYLVANIA**
Selby, Battersby & Company, Philadelphia
Standard Floor Company, Pittsburgh
- SOUTH CAROLINA**
Bonitz Insulation Co. of South Carolina, Columbia
- TENNESSEE**
Alexander Marble & Tile Company, Memphis
Anning-Johnson Company, Knoxville
Neison Baird Company, Inc., Nashville
- TEXAS**
Blue Diamond Company, Dallas
Builders Service Company, Fort Worth
J. E. Delehanty Company, Lubbock
General Supply Company, Inc., Houston
Houser Resilient Floors Co., El Paso
Raymond Rambo Materials Co., Corpus Christi
Rufus A. Walker & Co., San Antonio
- UTAH**
Utah Pioneer Corporation, Salt Lake City
- VIRGINIA**
Anning-Johnson Company, Alexandria
Manson-Smith Company, Inc., Norfolk and Richmond
- WEST VIRGINIA**
Asbestos & Insulating Co., Charleston
- WASHINGTON**
Elliott Bay Lumber Company, Seattle
Fiberglas Engineering & Supply, Spokane
- WISCONSIN**
Building Service, Inc., Appleton and Milwaukee
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Simpson also produces these other acoustical materials:
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The NATION'S SCHOOLS



THE CEILING: FORESTONE

QUIET—WITH BEAUTY...at less cost

Economical Forestone ceilings offer school officials and others an irresistible combination found in no other acoustical tile: only Simpson Forestone Fissured Woodfiber Acoustical Tile gives highly efficient sound control... *plus* rich textured beauty... *plus* low cost. Ask one of Simpson's skilled acoustical contractors (listed on opposite page) for FREE estimate.

**Simpson
Forestone®**
FISSURED TILE

THE SCHOOL LUNCH

Conducted by
Mary deGarmo Bryan

Cafeterias Built to a Standard Design

MARGUERITE MOORE

Director of School Cafeterias, Tulsa, Okla.

EMMA LEE HUTCHINSON

Administrative Assistant, School Cafeterias, Tulsa, Okla.

IN PLANNING school lunchrooms today, just as in planning for other phases of the school program, we must meet the accelerated demands of rapid growth. The ultimate objective, of course, is to provide at the lowest possible cost lunches of maximum nutritive value, prepared under sanitary conditions and served in attractive surroundings. A successful school lunchroom not only provides an adequate lunch but serves as a

laboratory for teaching good health habits and as a social center providing satisfaction and enjoyment.

In Tulsa there are all types of school cafeterias, from the most modern in design and equipment to small and temporary ones housed in prefabricated buildings. Cafeterias in newly constructed permanent buildings are of a relatively standard design. They must be planned not only for today but for 30 years hence; therefore, con-

struction, design and durability are much more important than in a commercial restaurant, which is usually remodeled in approximately five years.

The standard design has been developed over a period of 25 years. These plans are the direct result of the cooperative efforts of the architects, engineers, health department, superintendent of schools, assistant superintendent in charge of cafeterias, the cafeteria director, cafeteria managers, and the board of education. The standard design is adapted to each new building with only necessary modifications. This practice is economical as it simplifies the mechanical and struc-

In the work area of an elementary school kitchen in Tulsa, Okla., are, from left to right, the mixers, cook's table, pass-through refrigerator, baker's table, and manager's desk. The enclosed base units are mounted on terrazzo bases and are equipped with bins that are easy to pull out and lift up.



D

ependable consistency

If there is one spot in the menu where you can well afford to go "all out" it is in jams and jellies. A serving of a Sexton preserve will make all the difference in the world in guest pleasure—with scarcely a dimple in your food budget. Their luscious taste and true flavor comes from the choicest sun-ripened fruits and berries. Adding only pure cane sugar, cooking slowly and just enough, we bring them to perfection. You can serve no better.



Greenbrier Hotel
White Sulphur Springs, W. Va.



Sexton
Quality Foods

JOHN SEXTON & CO., CHICAGO, 1956

tural designs in the preliminary planning. The similarity of permanent school cafeterias has made possible more efficient and better equipped food units.

Plans for efficient operation must originate through the cafeteria director and be incorporated into the layout by the architect. It is recognized that either wasted space or expansion is

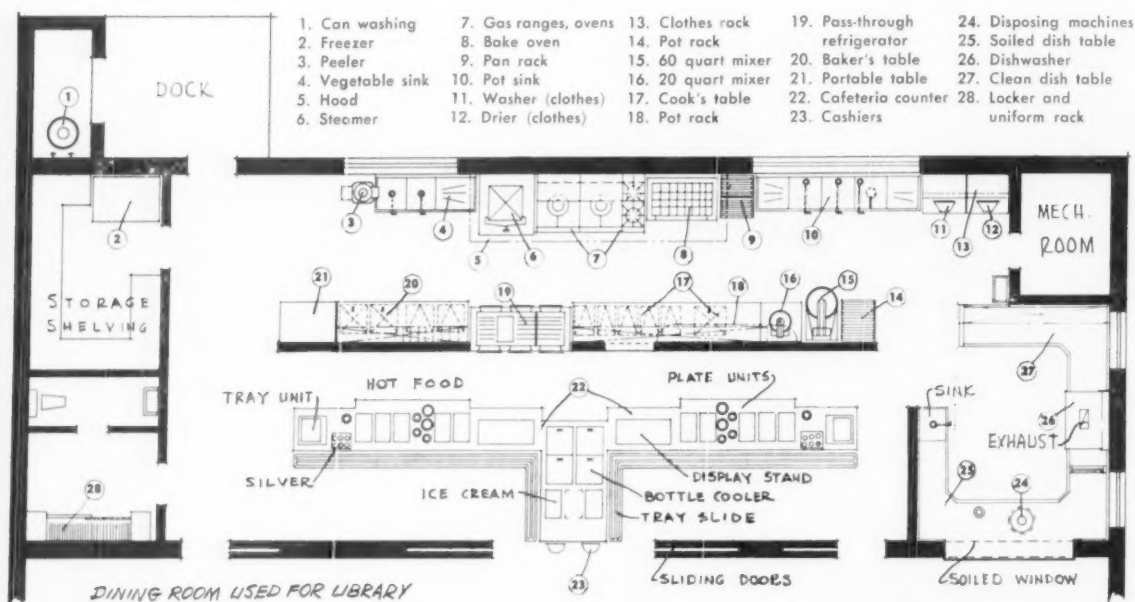
expensive. Lunchrooms have been moved from dark, damp basements to accessible and convenient locations. Present layouts provide for delivery and receiving and storage of food, as well as for preparation and serving.

Space is proportionally allocated. An elementary school has approximately 1500 square feet for kitchen, store-room and dressing room. The serving

area has approximately 520 square feet. The dining area has approximately 3000 square feet and is combined with a library; the books, pictures and other decorations are most appropriate and create a homey atmosphere.

All materials used in the cafeteria are durable, easy to clean, and require little maintenance. Acoustical tile is

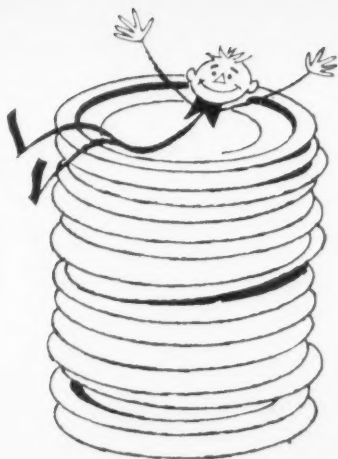
Equipment Arrangement Plan, Hoover Elementary School, Tulsa, Okla.



This kitchen has a salad section, a pass-through refrigerator, a cook's table, a pot and pan rack, a lavatory,

an automatic washer, a range, and a bake oven. The hood is equipped with filter screens that can be washed.





GET ON TOP OF THOSE DISHES with highest standards—lowest cost

Whether you wash 'em
by the dozens...or the gross...

YOU SAVE, when your dishwashing installation is carefully fitted to your needs. Too big, it wastes cost, horsepower, water, and valuable floorspace. Too small, and standards suffer; overworked equipment depreciates and operating costs mount.

That's why Hobart offers over fifty models ranging from the diet-kitchen-sized UM-3 to the great completely automatic twenty-six foot Flight-Type combining every dishwasher function. They come in every style and capacity you could need; fully or semi-automatic, with or without time controls—dual-drive automatic or continuous Flight-Type conveyors.

You'll get the size and type of machine for the most efficient operation from Hobart—plus Hobart engineered quality, the Hobart guarantee, and local Hobart service to keep standards high and costs low. Ask for literature . . . *The Hobart Manufacturing Company, Troy, Ohio.*

See Hobart—for ALL your food, kitchen and dishwashing machines

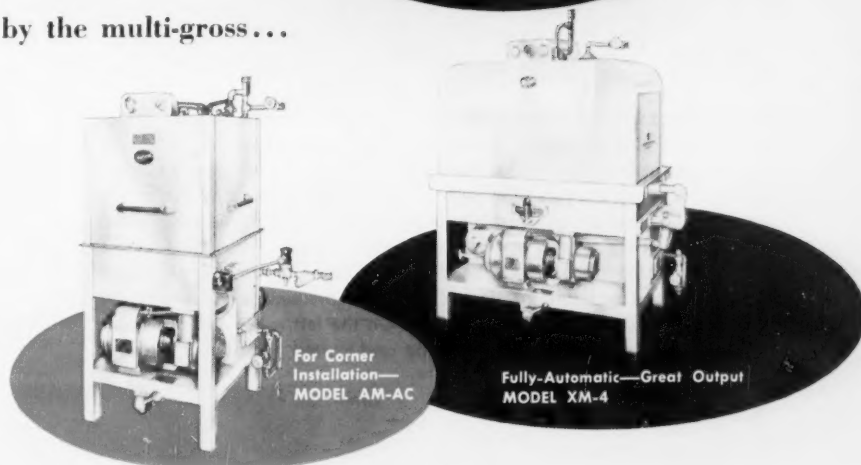
Trademark of Quality  for over 55 years

Hobart machines

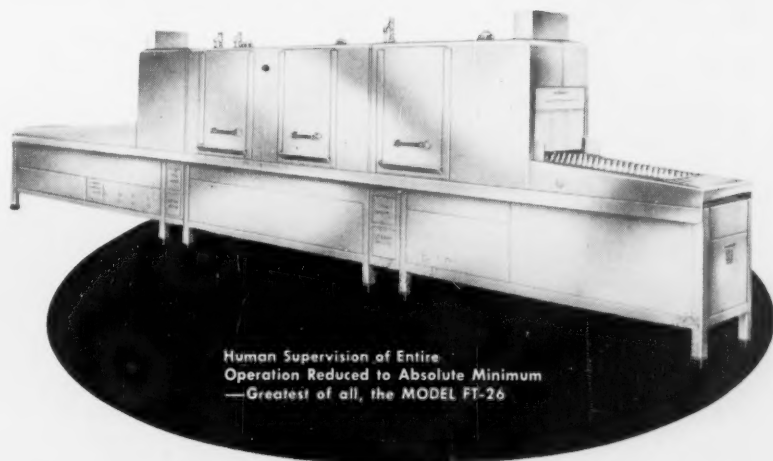
The World's Largest Manufacturer of Food,
Kitchen and Dishwashing Machines



by the multi-gross...



or by the carload...



preferred for ceilings and salt-glazed tile for kitchen walls. Terrazzo is excellent for floors, but cooking and baking areas are covered with strips of rubber matting.

The Tulsa public schools finance the building and equipping of new cafeterias; however, operation, maintenance, equipment and replacement costs must be paid from cafeteria funds. Each piece of equipment is carefully selected; it must speed production, be easy to use, and be con-

structed of durable metal that is easily cleaned and requires little maintenance.

Time and action studies are made in each new school to help us plan more efficiently the arrangement of equipment in future cafeterias. Receiving table, scales, refrigerator, deep freeze, and storeroom are located near the delivery entrance. The kitchen is equipped with worktables, cook's table, mixers, baker's table, and pass-through refrigerator. The preparation and cook-

ing area has mixers, sinks, steamer, range and bake oven. All stationary equipment is installed on a 2 inch or 4 inch terrazzo base for ease of cleaning. Portable equipment is used—ventilated vegetable bins, utility carts, tray conveyor units, pot and pan racks, and shelves for salads and desserts. This equipment not only saves many steps but also speeds production and service.

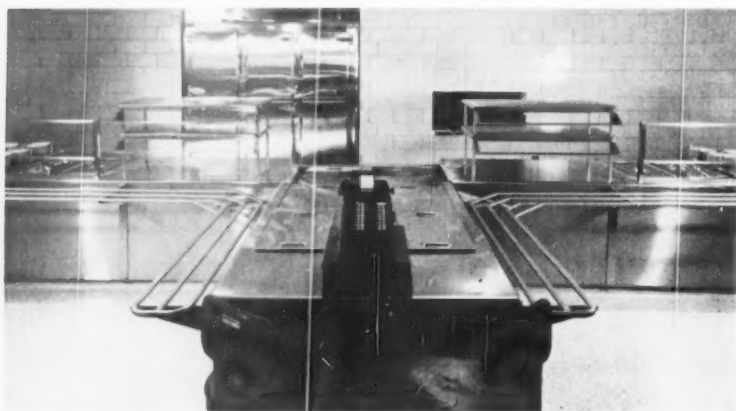
Stainless metal tables, sinks and counter have coved corners, smooth edges, and flat polished surfaces. These will neither corrode, wear, chip nor peel, are easy to clean, and will meet all sanitation regulations. An ordinary sink or table constructed of galvanized iron, or other inexpensive metals, will deteriorate and rust, especially while standing unused during the summer. By using stainless metal we eliminate maintenance on permanent installations.

In the school system, bake ovens with nickel copper alloy liners which have been in use for 10 years show no sign of deterioration. This type of equipment represents capital investment that reduces labor costs.

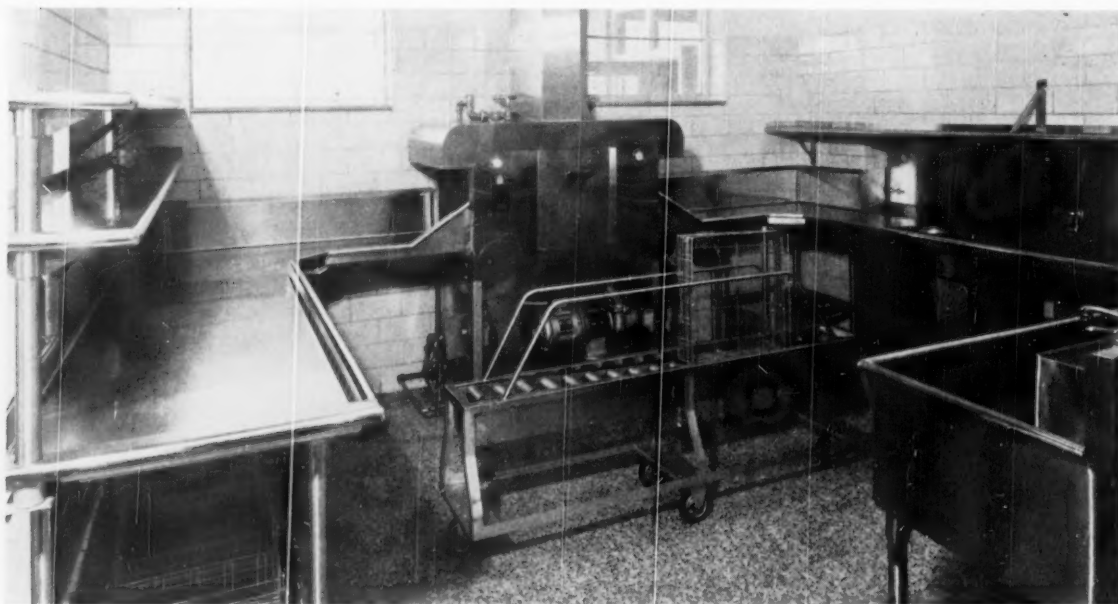
Specifications for equipment must be written clearly and concisely and should include the following (with some variations for different items):

1. Name of item.
2. Amount or number required.
3. Metal or material.
4. Construction.
5. Design.
6. Manufacturer and approved substitute.

(Continued on Page 100)



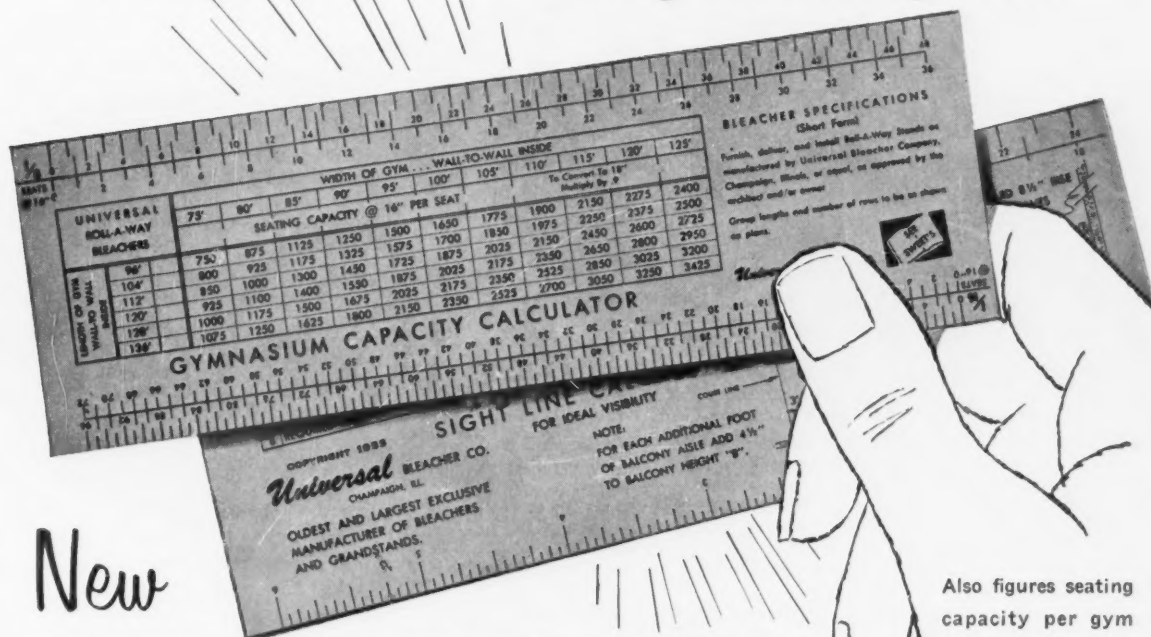
Above: There are refrigerated milk and ice cream cabinets at the end of the serving counter. Display shelves and hot food sections are protected with sneeze guards. Dishes for hot food are placed in vertical tray conveyors. The pass-through window on the back wall is next to the cook's table. Salads and desserts are kept in a pass-through refrigerator. Below: in the dishwashing room is a vented dish machine, with a door that can be opened when the machine is to be cleaned. On the right are a pull-down door above the pass-through dish window and a stainless metal table for soiled dishes, with a disposing machine. On the left is a clean dish table with cantilever supported shelves on top and slatted, removable shelving.



Planning a Gymnasium?



*Here's how to reduce cubage;
make big savings on
building and heating costs*



New

Calculator enables you to plan maximum balcony seating with minimum ceiling height

Designed by *Universal* engineers after years of on-the-job experience, this new calculator is now available to every architect and school official involved in planning a gymnasium. It is of inestimable value in determining balcony height for ideal seating sight line in relation to main floor seating. At the same time, it shows how such planning can reduce ceiling height to a practical minimum... for big savings in both building and heating costs. This calculator also figures seating capacities in relation to gym sizes, has $\frac{1}{16}$ ", $\frac{1}{8}$ ", and $\frac{1}{4}$ " scales as well as a standard rule. *Send for yours today.*

Also figures seating capacity per gym size... or vice versa

**IT'S YOURS
FREE
FOR THE ASKING**

UNIVERSAL BLEACHER CO. Champaign, Illinois

I would like _____ (how many?) of your calculators which can be used to advantage in planning a new gymnasium. This request involves absolutely no cost or obligation to me.

Name _____

Organization _____

Address _____

City _____ State _____

NEW TOLEDOS

streamline kitchen service in **BIG BROMLEY** Ski Area **RESTAURANT**



A warm welcome, fun and fine food await guests at Big Bromley Ski Area Restaurant, hugging the snow clad slopes of Vermont's Big Bromley Ski Area near Manchester Center.

This well-managed restaurant speeds kitchen operations and food service with efficient, labor-saving Toledos. Ample supplies of sparkling-clean dishes and tableware are provided by a Toledo Conveyor Dishwasher with Pre-Wash. A new Toledo Slicer with illuminated platter and gravity feed makes short, easy work of slicing chores . . . is super-safe to clean. And fast, double action peeling that goes just "skin deep" is routine, thanks to a new Toledo Peeler.

It will pay you to check on new Toledos for your kitchen, too. We'll gladly send you the latest information without obligation. New catalogs on dishwashers, peelers, disposers and food machines are ready. Write for those that interest you.



A Toledo Dishwasher, Slicer and Peeler help Big Bromley Ski Area Restaurant maintain high standards of kitchen service with important savings in time and labor.



TOLEDO SCALE COMPANY

Kitchen Machine Division
245 Hollenbeck St., Rochester, N.Y.

(Continued From Page 98)

7. Unit—for example, a refrigerator—to be furnished with insulation, shelving, hardware, hinges and locks, compressor (specify kind or type), lighting, finish (exterior and interior), and extras, if any.

8. Name of person responsible for delivery, uncrating, leveling and connection.

9. Installation: connections and controls necessary for the equipment; contractor or department responsible for making the hook-up.

Bids on equipment should be mailed 30 days before contract is to be let; 15 days should be allowed for detail processing, and 120 days for fabrication. Basically, there should not be a wide variation in bids; if there is, the specifications were poorly written. The acceptance of substandard equipment makes it difficult for other food service directors to demand equipment that will meet specifications.

EQUIPMENT IMPROVED

Equipment manufacturers are recognizing the necessity of building durable, easy to clean, streamlined kitchen equipment. Various companies have cooperated in fabricating more efficient and serviceable equipment; for example, a special cook's table is equipped with a single locking device and easy to pull out and lift up bins. Another manufacturer added a door to a dish machine for ease of cleaning. Cooperation between the food service director and the manufacturer is advantageous to both. The standardization of more kitchen equipment could decrease the necessity for having all equipment fabricated. The pass-through refrigerator is an excellent example of improvements that can save workers' time.

Serving areas are arranged to serve the students adequately and speedily. Many principals are requiring a closed lunch period, with only a few pupils being granted permission to leave the school grounds. Floating class schedules eliminate long lines. Principals should cooperate with the manager and arrange to release pupils on a staggered basis. Approximately six pupils can be served per minute in each line.

Food is attractively and conveniently arranged on counters. The standard counter has conveyors for trays and dishes. Silverware is handled in special containers that may be run through the dishwasher and returned to the

Extra Funds

**FOR: ATHLETIC EQUIPMENT
BAND UNIFORMS
VISUAL AIDS EQUIPMENT
AND OTHER EXTRA-CURRICULAR SCHOOL ACTIVITIES**

Come Easy with a New Manley

VistaPop[®] Popcorn Machine in Your School



The Manley VistaPop has solved the problem of how to secure those much-needed, but often-missing, extra school funds needed to purchase things not provided for in the school budget.

How? Wherever a crowd gathers you are bound to find people with a yen for fresh, hot, delicious popcorn. And, with a VistaPop on the spot you can satisfy their desire. The profits you make from the sale of popcorn provides extra funds you need for your school.

The Manley VistaPop is the easiest of all popcorn machines to operate. With just a few minutes instruction any student in your school can be an expert operator. Just a few simple, automatic controls to operate . . . the machine does the rest . . . it's truly semi-automatic. Yes, there's a great money making opportunity awaiting your school. Why not take a minute, right now to fill out the coupon below so you can have all the information. No obligation, of course.

IN JUST A FEW DAYS YOU CAN HAVE THE SOLUTION TO ONE OF YOUR SCHOOL FUND PROBLEMS

Yes, by return mail, in just a few days, we will put in your hands the full details on how the Manley VistaPop can solve your problem of how to obtain extra school funds. If you prefer, we will have a representative call at your convenience to talk with you.

MANLEY, INC.
1920 Wyandotte St.,
Kansas City 8, Mo.

MANLEY, INC., 1920 Wyandotte St., Kansas City 8, Mo., Dept. NS-956.

- ☐ I would like to talk to a Manley representative. I understand there is no obligation.
- ☐ Send me full information on how my school can benefit from having a VistaPop popcorn machine.

NAME _____

TITLE _____

SCHOOL _____

CITY _____ ZONE _____ STATE _____

THOUSANDS INSTALLED IN '55

Sani-Dri Saves All Towel Costs!

Cuts Maintenance . . .
Automatically
Eliminates Litter!

No. 7-A Sani-Dri
in school



Not 30% . . . not 60%
... you get 100% savings
on towel costs with
Sani-Dri . . . plus 85% sav-
ings on maintenance over-
head. No more empty towel
cabinets . . . no messy, un-
sanitary washrooms . . . no
fire hazard . . . no clogged
plumbing. Sani-Dri gives
you 24 hour automatic dry-
ing service that is clean
and sanitary, plus savings
never possible with towels.
Underwriter's Seal and
full 2 year guarantee!



No. 8-A Sani-Dri in
public building

HAIR DRYING is now considered a
must in girls' shower rooms in today's
schools to prevent colds and sickness.
Sani-Dri also used to dry athletic equip-
ment—ideal for pools, etc.

WRITE TODAY!
Get the actual savings facts
about the original and only
complete line of electric
hand and hair dryers.



THE CHICAGO HARDWARE FOUNDRY CO.
3396 Commonwealth Avenue
North Chicago, Illinois

counter. Sections for hot food and display shelves for desserts and salads are protected with approved sneeze guards. A refrigerated section for milk and ice cream serves two lines.

Dish rooms are near exits so that pupils may deposit dishes as they leave the cafeteria. Elementary schools have gradually sloped ramps in front of the dish room window to accomodate first and second grade pupils. Disposing machines have been installed to dispose of garbage immediately and to prewash dishes as they are racked. Dish machines vary from the large conveyor type to the single basket machine, depending on the size of the school. In the elementary school, the preferred machine is a two-basket stainless metal conveyor type of machine, with thermometers for wash and rinse sections. These machines are vented with a double wall, insulated duct to the ceiling to pick up saturated, steam laden air. Cantilever supported shelves are installed over the clean dish table. A portable dish basket return eliminates lifting.

In the junior and senior high schools belt conveyors are used to transport soiled dishes to the dish room. The saving in dish breakage and labor more than pays for the expense of the installation.

SANITATION LAWS ENFORCED

All equipment used in the cafeterias complies with city, county, state and federal health regulations as they are written today and as they are contemplated for tomorrow. School officials and the health department cooperate, as they agree that there is justification for rigid enforcement of sanitation laws in the school cafeterias. Maintaining adequate hot water, 140° for wash and 180° for rinse, is one of the big problems.

The ability to maintain good personnel conditions at a low labor cost is in part due to the design and arrangement of the equipment. Modern up-to-date equipment such as dish machines, electric washers and dryers, and peelers reduce the drudgery of the menial tasks, thus making it possible to hire a much higher type of worker. Cooks and managers are employed full time (eight hours); general helpers work on part-time basis, from two to six hours per day. Since the cafeterias must be entirely self-sustaining, a low labor cost allows a higher percentage of income to be spent for food.

The key to the operation of the Tulsa public school cafeterias has been centralization and standardization through cooperation. Since 1923, our cafeterias have been centrally administered, thus making it possible for the board of education to establish uniform policies on a sound business basis with high standards of food service throughout the school system.

Central control makes possible uniform personnel policies, central purchasing and accounting. The central office is responsible for bookkeeping; however, cafeteria managers are accountable for the accuracy of records in the units. A printed manual of instruction, which is issued to school managers and building principals, provides uniform instruction concerning policies and procedures.

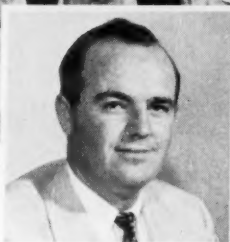
A primary objective of the central system is to provide the same quality and quantity of food to every pupil, regardless of the size or location of the school he attends. In Tulsa this has been accomplished by standardizing menus and recipes, which has made necessary the standardization of equipment. A complete manual with a picture and a description of each piece of small equipment was compiled and printed in order to assist the manager, the director, and the equipment companies.

The basic menu, offered in every school, is printed weekly in the two local newspapers. A menu planning committee (five cafeteria managers and a dietitian) meets with the director to plan menus for the month. Each manager serves on this committee sometime during the year and is encouraged to offer ideas, new recipes, and suggestions.

Inservice training classes for cooks and elementary school managers are held each semester. With the exception of dietitians, who are employed in the secondary schools, all promotions are made within the system.

Tulsa school cafeterias are accepted as an integral part of the school system. Participation in the lunch program averages as high as 90 per cent in some schools. Lunch tickets are sold in the elementary school cafeterias—more than three-fourths of the pupils purchase tickets each Monday morning. Every child is encouraged to eat in the cafeteria, regardless of whether he buys his lunch or brings it from home. Many sack lunches are supplemented with milk or other food from the counter.

#



Mr. Ralph L. Martin,
Assistant to the Superintendent,
Consolidated School District #2,
Raytown, Missouri.

"We've been using

Fords in our fleet for 10 years.

And now we're buying six more"

Dependable B-700. Carries 66 passengers.
Wheelbase 245 in. Max. GVW: 21,000 lbs.

says Mr. Ralph L. Martin

**Ford meets these
N.E.A.
Safety Standards**

Power-type brakes shall be part of equipment for chassis designed for 48 passengers or more.

Brake vacuum reservoir shall be at least 1000-cu. in. capacity for vacuum-actuated systems.

Front bumper must be of sufficient strength to permit pushing vehicle of equal gross weight without permanent distortion.

Drive shaft shall be protected by metal guard to prevent it from whipping through floor or dropping to ground if broken.

Fuel tank shall have minimum capacity of 30 gallons and be made of 16-gauge terneplate or equivalent.

Flexible gasoline- and oil-proof connections shall be provided at engine end of fuel line.

Rear springs shall be of the progressive type.

Stationary eyes of front springs shall be protected by wrapper leaf in addition to main leaf.

All tires shall be of same size and ply rating.

**Ford surpasses these
N.E.A.
Safety Standards**

Front axle shall have gross weight rating equal to or exceeding load supported by front axle.

Rear axle shall be full-floating type and have a gross weight rating equal to or exceeding load supported by rear axle.

4-wheel brakes adequate to control fully loaded bus shall be provided.

Brakes shall be able to stop vehicle within 22 feet when driven at 20 m.p.h. over dry level road.

Grade ability must be such that bus can climb 3% grade at least 20 m.p.h. (fully loaded).

Double-action shock absorbers of adequate size shall be provided at front.

Springs must have ample resiliency to sustain fully loaded bus without evidence of overload.

Steering gear shall be designed to provide safe and accurate performance when vehicle is operated with maximum load and at maximum speed.

"We carry over 5,000 children and cover 230 miles a day. Yet gas and oil costs average only 3.5 cents a mile."

"We chose Ford because their standards in safety, reliability, and comfort meet or exceed N.E.A. Safety Standards," says Mr. Martin. "And for our specifications *Ford's prices were lower than other makes.*"

For your operation you need the best. Ford pays off—costs less to buy, less to run. And Fords last longer (certified by independent insurance actuaries).

For '56, Ford offers you 5 new superior Short Stroke engines—from a 133-h.p. Six to the powerful 185-h.p. V-8.

Ford chassis are built to accommodate a complete range of bus body sizes—from 36-passenger or less, all the way up to high-capacity 66-passenger bodies.

See your Ford Dealer today, or write for details to: Ford Division of Ford Motor Company, P. O. Box B-2, Dearborn, Mich.

**BIG FLEET OWNERS BUY MORE FORD
TRUCKS THAN ANY OTHER MAKE**

AUDIO=VISUAL

INSTRUCTION AND FACILITIES

Conducted by
Walter A. Wittich

Planning A-V Facilities for Future Buildings and Curriculums

WALTER A. WITTICH

Director, Bureau of Audio-Visual Instruction
University of Wisconsin

EVERY 10 minutes a new school will be built if the need of our 1956-57 school population is going to be adequately met. What quality of instruction can be arranged to go in all these new schools?"

With these words Clyde Parker, superintendent of schools, Cedar Rapids, Iowa, challenged more than 500 audio-visual specialists, distributors and manufacturers assembled at the 13th annual meeting of the Educational Film Library Association held in Chicago in late July.

He anticipated other program speakers who called upon the audio-visual people assembled to help plan what current and future classrooms should include by way of audio-visual instructional materials and personnel to guide and use audio-visual learning experiences for tomorrow's pupils.

"The audio-visual expert is rapidly becoming a much needed and appreciated member of the school staff,"



Supt. Clyde Parker, Cedar Rapids, Iowa, was keynote speaker for Educational Film Library Association.

Mr. Parker said. "He is being more and more thought of as a team worker and consultant who works shoulder to shoulder with the curriculum supervisor or teacher committees concerned with planning curriculum and implementing it through experiences which will make subject content meaningful to learners from kindergarten through college level. The audio-visual super-

visor should be chosen because of his complete professional training, successful teaching experience, and practical understanding of the needs of learners for experiences which are understandable and useful—experiences which can best be supplied through a wide use of such materials as films, filmstrips, slides, charts, tape recordings, and opaque projectors."

Supt. Parker's description of the rôle of the audio-visual supervisor included this statement about the kind of preparation which this new professional worker ought to have in order to make his services to the school system most effective:

"The audio-visual person, I believe, must be one of our most broadly trained staff members. He must have a background of professional training in administration, philosophy, curriculum, child psychology, and supervision. In addition, he must be acquainted with science and social study and language arts methods. He must have acquired successful classroom teaching experience. Having such, he can offer an outstanding and much needed service as one who serves as a consultant to curriculum committees and teachers as both seek to improve learning experiences in the classroom."

The concern for the nature of tomorrow's classrooms and the increasing number of pupils who will find their way to them was expressed by Adrian L. TerLouw, educational consultant, Eastman Kodak Company. He said:

"The classroom of today and tomorrow must give Johnny a chance to see—to observe everything there is to be seen and understood through demonstration, projected materials, reading, class projects, and discussion."

Mr. TerLouw used slides to demonstrate the plight of "Johnny," who sits in the back corner of the room, squints through glare, and too often sees little he can understand as he looks at chalkboard symbols too small for recognition, maps printed with symbols which can be seen only at the front of the room, or projected images on screens which are poorly located in classrooms where lack of proper light control does not permit understandable recognition of the images.

A panel of educators and film producers introduced the subject of the newest audio-visual material—the kinescope. "The kinescope," the panel summarized, "makes its appearance as a new but highly valued opportunity for classroom study enrichment. As an



New president of E.F.L.A., Erwin Welke of the University of Minnesota Audio-Visual Center, shakes hands with the retiring president, Garrett Weathers, director of research and of audio-visual education for schools of South Bend, Ind.

ROCKWELL-BUILT

new DELTA 12" wood lathe



...variable-speed, gap bed cabinet model for wood turning, metal spinning and turning light metals

—Engineered for student safety—ideal for student instruction—built for years of maintenance-free student operation—all at a surprisingly low price!

VERSATILE—New variable-speed drive gives you an extremely low 340 rpm speed for turning heavy or rough wood and light metals—plus an infinite choice of speeds up to 3200 rpm, a really safe speed for sanding, polishing and metal spinning. And you can do many extra jobs with the more than 50 Delta accessories available.

SAFE, EASY TO OPERATE—Completely covered drive mechanism makes it impossible for students to come in contact with moving parts. An extra safe push button switch, convenient hand wheels, an inclined, graduated speed indicator—plus many

other safety and convenience features provide safe, simple operation.

BIG CAPACITY—Full 38" between centers with 12" swing over the bed—a 16½" swing over gap for stock up to 3½" thick.

BUILT FOR LASTING ACCURACY—A rugged, heavily ribbed bed assures minimum vibration, absolute alignment. Massive spindle, pre-loaded sealed-for-life ball bearings and perfected variable-speed drive give you years of accurate, dependable operation with little maintenance.

See this great new Delta lathe. Get all the facts—compare—and make up your own mind! Your Delta Dealer is listed under "TOOLS" in the Yellow Pages of your phone book.

Send coupon for all the facts



another product by
ROCKWELL



Delta Power Tool Division, Rockwell Manufacturing Co.
406J N. Lexington Ave., Pittsburgh 8, Pa.

☐ Please send complete information on new Delta 12" Wood Lathe.

☐ Please send name of my nearest Delta Dealer.

Name _____ Title _____

School _____

Address _____

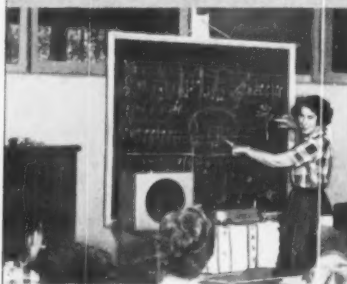
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Speaker at the meeting of the Association of Chief State Audio-Visual Officers was George E. Watson (center), state superintendent of public instruction for Wisconsin. In this picture are (l. to r.) Seerley Reid, chief, visual education section, U.S. Office of Education; Garland C. Bagley, audio-visual consultant, Georgia State Department of Education, the group's new president; Mr. Watson; Russell Mosley, audio-visual consultant, Wisconsin Department of Public Instruction, the retiring president, and Floyd E. Brooker, Department of Audio-Visual Instruction, N.E.A.

enrichment material, kinescope films—actually recordings of live television programs which are judged to be of educational value—are made at the time of television broadcasts. Appropriate and useful kinescopes are then made available for classroom use in the same manner as are 16mm classroom sound motion picture films. From the mechanical standpoint, kinescopes and films are identical. The manner in which they are made, however, is different. By the selection of those television broadcasts which possess high educational value and the making of such broadcasts available as kinescope film recordings, the needs of education can be further served by these additional enrichment materials."

New president of the Educational Film Library Association is Erwin Welke of the University of Minnesota Audio-Visual Center. He succeeds Garrett Weathers, director of research and of audio-visual education for the public schools of South Bend, Ind.

Meeting jointly with E.F.L.A. was the National Audio-Visual Association, a rapidly growing association of manufacturers and distributors of audio-visual materials. A full-scale exhibit

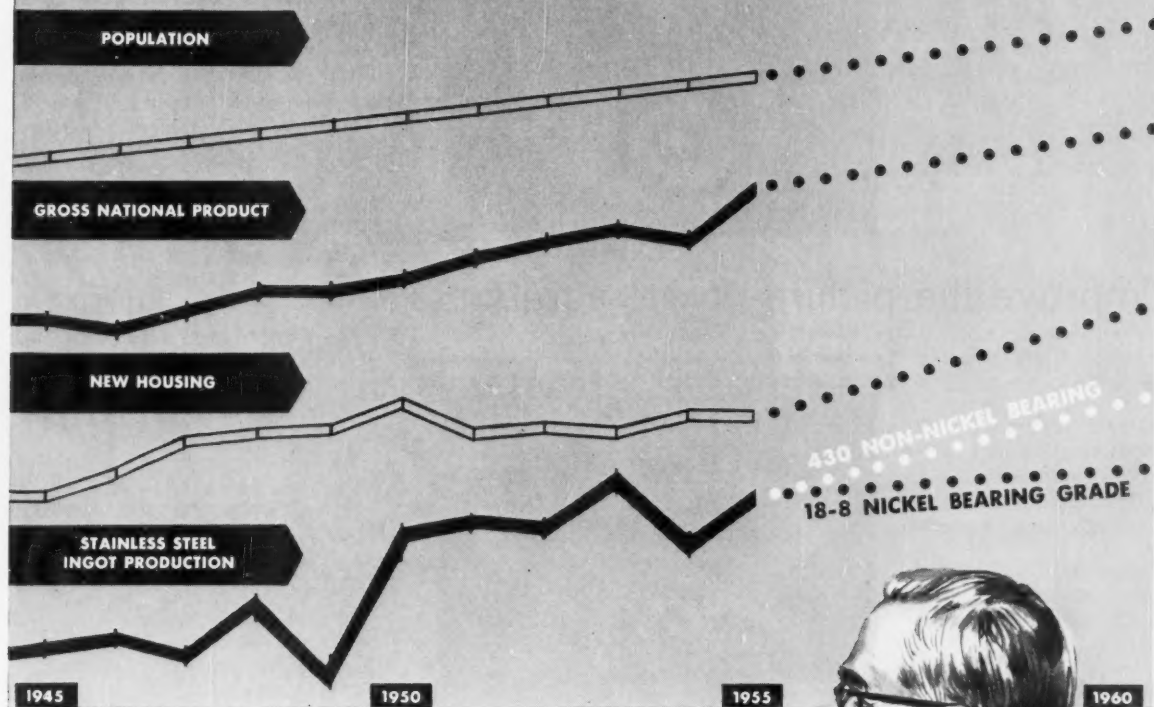
of new audio-visual equipment, school building and classroom audio-visual materials, and room darkening equipment highlighted the joint conventions and gave audio-visual educators from the United States and Canada an opportunity to see what progress has been made in the last 12 months.

The National Audio-Visual Association adopted a resolution putting on record the trade and industry group as pledging support and full cooperation to the efforts of the newly formed Audio-Visual Commission for Public Information, the Council of Audio-Visual Organization Presidents, and the School Facilities Council. The association commended its executive vice president, Don White, for his part in helping to bring about the establishment of these groups and for the program of public information and public relations which the association is initiating.

The association is moving its headquarters from Evanston, Ill., to Washington, D.C., according to an announcement made during the convention. Mr. White said the move will be made because of expansion in the industry.

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GENERAL  ELECTRIC

tional, religious and industrial groups whose headquarters are in Washington," he explained.

The Audio-Visual Commission for Public Information released at the audio-visual convention two basic yardsticks for measuring the development of audio-visual programs in schools. One is a list of minimum required equipment and facilities, and the other is a declaration that a minimum but adequate audio-visual program can be built with 1 per cent of the annual school budget.

The meeting of the chief state school audio-visual officers was held in Chicago the same week the E.F.L.A. and N.A.V.A. meetings were held. Audio-visual persons and school administrators appeared on the state officers' programs. George E. Watson, state superintendent of public instruction for Wisconsin, in his address said:

"Parents interested in better education for their children must realize that audio-visual methods and materials will enable teachers to provide just that. Good teaching will demand more and better use of audio-visual materials.

"Demand for educational efficiency is increasing constantly from the taxpayer. There is more and more conflict for the school dollar. One way to obtain more efficient education," Supt. Watson continued, "is to provide teachers with the modern teaching tools they need, making full use of the audio-visual materials and technics now available.

"One of the big jobs is to see that all teachers in teacher training institutions, in all subject matter areas, are made familiar with the ways in which correct use of audio-visual materials and equipment can help them to do a better job.

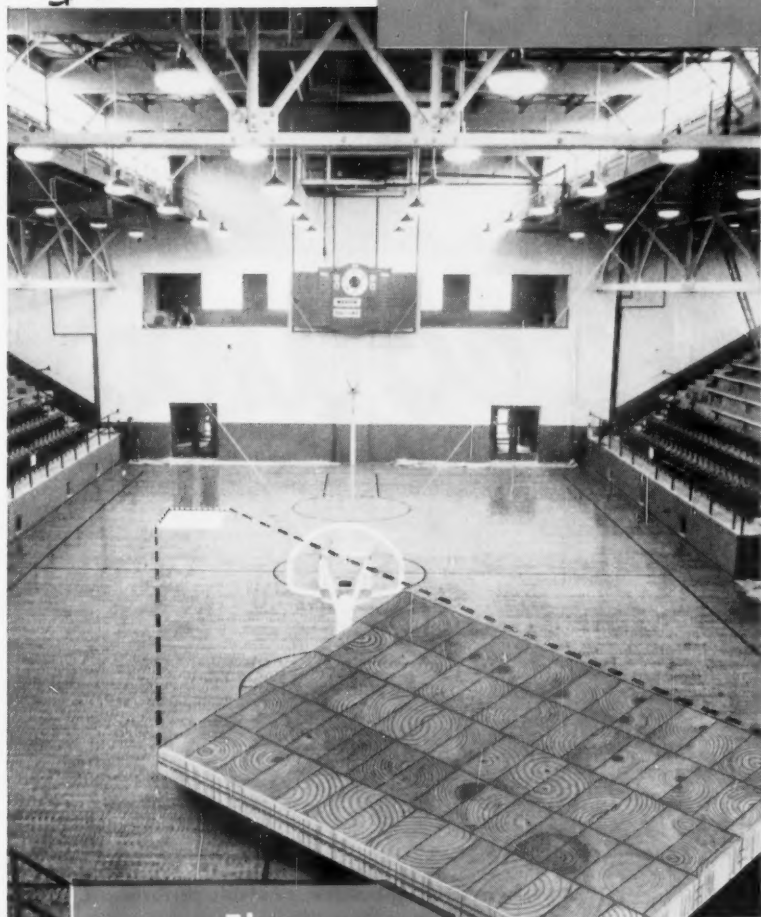
"The audio-visual specialist must always keep in mind the practical, average classroom level and work closely in cooperation with curriculum and other groups—all of whose efforts are directed toward the single goal of improving educational experiences for all children and youth," advised Supt. Watson.

Garland Bagley, audio-visual consultant for the Georgia State Department of Education, was named president of the Association of Chief State Audio-Visual Officers at the close of the convention. Dr. Bagley succeeds Russell Mosely, audio-visual consultant for the Wisconsin Department of Public Instruction. #



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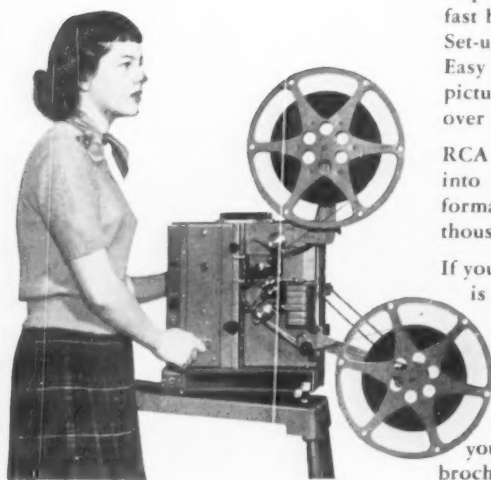
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By **EDGAR FULLER**

Assistance laws extended

► On July 7 the House by voice vote extended Public Laws 815 and 874 to June 30, 1958. The Senate followed suit on July 23, attaching a few minor amendments. Requirements for construction during the coming year have been estimated by the U.S. Office of Education at \$108,500,000, and for maintenance and operation, \$113,050,000. New funds appropriated were \$108,500,000 for construction and \$34,050,000 for maintenance and operation. There was a \$79,000,000 carry-over for maintenance and operation from funds previously appropriated.

Two factors prevented extension of these laws beyond 1958 as desired by many members of Congress and beneficiaries of the laws. The first was that the Department of Health, Education and Welfare opposed a longer extension because the department is studying the federal assistance programs, hoping to improve them. The second was that a longer extension would fall beyond the "short period of grace" during which Congressman Adam C. Powell had announced he would withhold his "anti-segregation" amendment from federal laws supporting education which were already in effect at the time of the Supreme Court's decision on segregation in public schools.

In the House debate there were a few lame efforts to differentiate the federal assistance laws from the Kelley bill on issues on which it is doubtful that there are differences in fact. No one questions that federal responsibility is more direct where federal operations undermine the local tax base and overcrowd the schools than it is in other needy school districts. But congressmen were silent who had claimed two days before that no Powell amendment was needed to authorize the commissioner of education to withhold funds under the Kelley bill for failure to desegregate schools. He apparently has the same authority un-

der the federal assistance laws and all statutes authorizing federal funds for schools. The Constitution does not apply to future laws alone.

The great fear of congressmen was Representative Powell's threat against all federal education funds, as stated in a minority report attached to the House committee's report on extending the federal assistance laws:

"The legislation before us is legislation continuing a project which was begun prior to the Supreme Court decision of May 17, 1954. While it is my firm and unalterable conviction that all federal legislation, in the language of the Supreme Court itself, 'must yield to' the new decision, yet I believe on matters involving projects that are not new a *short period of grace* would enable all sides to adjust to the new decision. I am not in favor of any federal legislation which disobeys the Supreme Court edict. I am, therefore, voting 'present' on this particular legislation but desire to state that when this matter does come before the committee and the House of Representatives again within the next two years, I will then present an amendment designed to withhold all federal funds from aiding any school in any impacted area which does not follow the Supreme Court decision of integration in public education. I also will introduce the necessary amendments to appropriation bills for the Department of Health, Education and Welfare which cover not only this project but other projects in the field of federal aid to education."

Rep. Carl Elliott (D-Ala.) frankly recognized the general concern on the floor about what will happen after the "short period of grace" expires. "I am very fearful," said he, "that it [the Powell amendment] means the end of this very beneficial legislation."

No one can be certain what the situation will be two years from now, but it is entirely possible that by then the Powell amendment will not be a

threat either to the federal assistance laws or to any other aspect of federal support for education. When the federal assistance, vocational education, research, land-grant, lunch and other federal funds are threatened together, a large majority of both House and Senate will probably agree the Powell amendment is extraneous to them.

Council for Basic Education

► An anonymous foundation has made a \$114,000 grant for the first three years of operation of a Council for Basic Education. Prof. Arthur Bestor of the University of Illinois is its president, and Prof. Harold L. Clapp of Grinnell College, Grinnell, Iowa, is its full-time executive secretary.

It is organized to ensure educational opportunity for able students "equal to that offered the ablest in other lands." An office will be established in Washington to promote the purposes of this council.

Lyle Ashby of the N.E.A. has issued a statement welcoming the Council for Basic Education to Washington but pointing out that no member of the founding group is a teacher, principal, supervisor or superintendent in an elementary or secondary school. Several are authors of articles and books critical of American schools.

Beyond high school

► The President's Committee on Education Beyond the High School, which has been operating since March on emergency funds provided by the President, was voted \$150,000 by Congress on the last day of the session. A bill authorizing \$650,000 "to encourage and assist each state to provide for a state committee on education beyond the high school," plus an additional amount to be determined by Congress for committee expenses, passed both houses a few days before adjournment. However, the only appropriations voted were \$150,000 for the President's committee. The fed-

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eral subsidies for state conferences, if any, will have to await action by the 85th Congress.

The 33 member committee, whose chairman is Devereux C. Josephs, has held three regular meetings and a special meeting with representatives of national organizations concerned with education. There are tentative plans for several regional conferences during the coming year. Meantime, the chairman has appointed four subcommittee chairmen to study four topics during the summer. A review of their work will be made at the next regular meeting on October 5.

The topics and the subcommittee chairmen are: "What Is the Demand for Post-High School Education Now and for the Next 10 to 15 Years?" (chairman, Arthur G. Coons, president, Occidental College, Los Angeles); "What Are the Resources to Meet the Demand Now and in 10 to 15 Years?" (chairman, Katherine E. McBride, president, Bryn Mawr College, Bryn Mawr, Pa.); "What Proposals Have Been Made for Modification and Improvement?" (chairman, Msgr. Paul C. Reinert, president, St. Louis University), and "What Are and Should Be the Relationships Between the Federal Government and Education Beyond the High School?" (chairman, Laurence F. Whittemore, chairman of the board, Brown Company).

Fundamental changes in TV

► The Federal Communications Commission, in its report and order of June 25, 1956, has proposed to shift all television broadcasting to the ultra-high frequency band (Channels 14 to 83). On July 21, the Senate committee on foreign and interstate commerce endorsed the plan and urged the F.C.C. to proceed as rapidly as possible to "deintermix" U.H.F. and very high frequency (Channels 2 to 13). This would make specific communities either all V.H.F. or all U.H.F. during the transition period. The F.C.C. report proposed such changes in 13 communities in its order of June 25.

The suggested changeover is, of course, tentative, and a decade or more will be required to make it effective even if it is finally adopted. Meanwhile, a real fight will be staged by major networks and V.H.F. interests generally to defeat the plan.

Some of the background should be of interest to educators. Since the Federal Communications Commission adopted the television allocation plan

of 1952, serious problems have impeded the expansion of the nation's television service. One is the limited number of V.H.F. channels on which both commercial and educational stations may be built. Plans to use the 70 U.H.F. channels to supplement V.H.F. television have not developed well, because of two major factors: (1) the high proportion of V.H.F. only sets in use, and (2) the comparatively poor performance of U.H.F. transmitting and receiving equipment. The F.C.C. frankly recognizes that its bold plan for more competitive and extensive nationwide television service is not possible until some solution is found to these problems.

The upheaval such a major reallocation of our present system of telecasting would cause can be justified only by provision of a more adequate television service for all the people and a more equitable system of competitive commercial television.

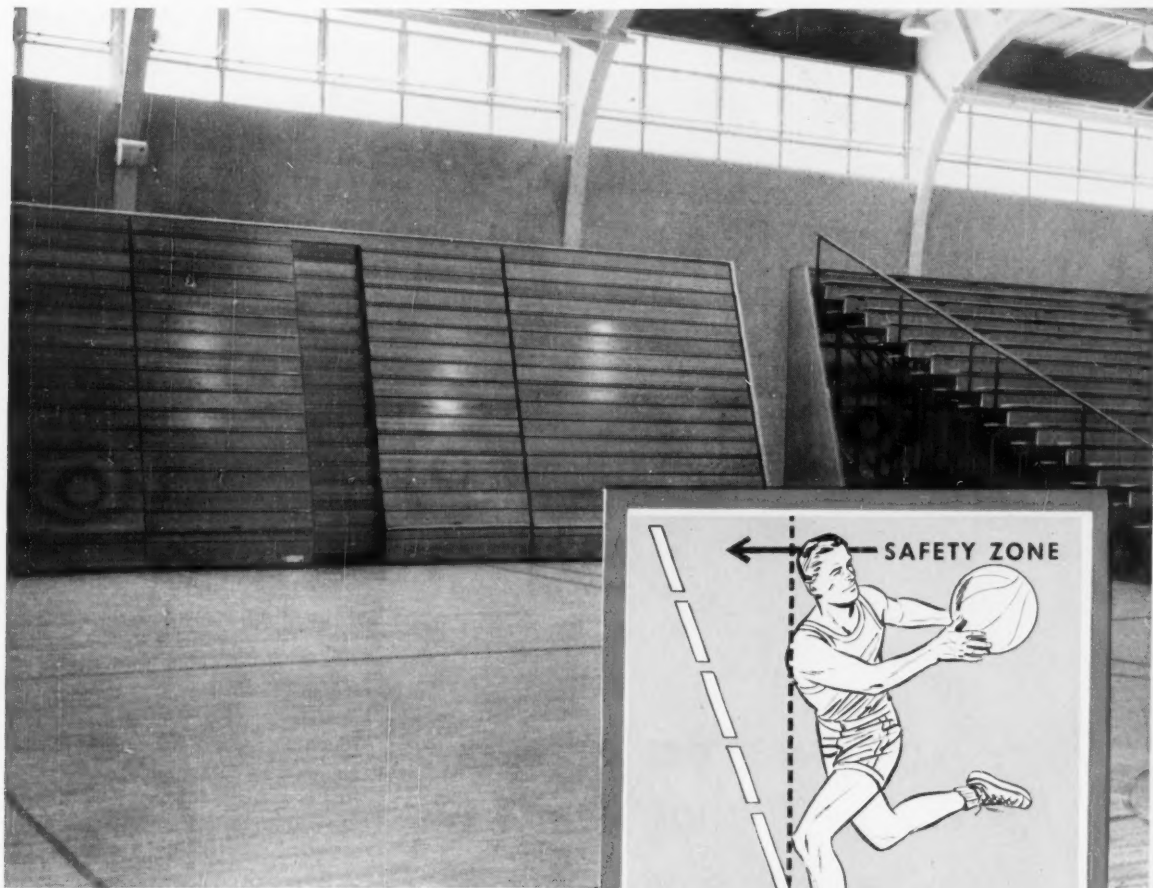
George McConnaughey, F.C.C. chairman, predicts that an all-U.H.F. broadcasting system will wipe out concern over alleged monopoly in the industry. He believes that many more stations would be built and that the public would have program choices from additional networks.

The F.C.C. order was an unexpected answer to the pleas to "do something about U.H.F." The final decision will be made by the F.C.C. on the basis of comments filed by the television industry, educators and other interested parties.

The commission invites comments on its proposal to "deintermix" 13 communities during the transition period, with a final date of September 10 for filing. Comments on the methods and timing of the over-all transition may be filed before October 1. The commission also invites comments on its proposal that programs of research be conducted toward the improvement of U.H.F. receivers and the increased power of U.H.F. transmitters. No limit has been set for filing these comments. Research to improve U.H.F. is widely believed to have been badly neglected by the industry.

With specific reference to the problem of increasing the number of U.H.F. receivers, the commission has suggested that Congress consider legislation which might allow tax deductions for U.H.F. sets, or even prohibit shipment in interstate commerce of sets not equipped to receive U.H.F. About 73 per cent of all American families

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now have television sets, but comparatively few of these are equipped to receive U.H.F. broadcasts.

Reaction to the proposal varies according to the interests of the groups concerned. The opposition of V.H.F. operators and manufacturers will be offset somewhat by U.H.F. operators who have been struggling to build a program audience against the stiff competition of established V.H.F. networks. Manufacturers who have thus far failed to turn out high quality U.H.F. equipped sets, perhaps waiting to see what the fate of U.H.F. will be, may or may not be willing to invest in the research and engineering necessary to improve U.H.F.

Educators are in very much the same position as the commercial broadcasters. They operate on both V.H.F. and U.H.F. frequencies. However, more than two-thirds of the channels reserved for education are in the U.H.F. band, and the ability of educators to get on the air at favorable hours would be greatly enhanced if an all-U.H.F. system were finally achieved. Even though a single U.H.F. station covers less territory than a V.H.F. station, the 70 U.H.F. channels would provide more room on the air for both educational and commercial broadcasting than is now available on the 12 V.H.F. channels. Many of the problems of air time for education would probably be solved if the F.C.C. plan succeeds.

Last-minute action

► The legislative jam during the last days of the 84th Congress produced, among others, these items of educational interest.

1. The Library Services Act was implemented by a \$140,000 appropriation to the U.S. Office of Education for administration and \$2,050,000 for rural library programs in the states. A total of \$7.5 million was authorized, but Congress decided the program could be started and operated on the smaller amount until further appropriations can be made by the next Congress.

2. Congress again exhibited its exceptional interest in mentally retarded children by earmarking \$1 million of its appropriation to the Children's Bureau for special projects. This is the third federal agency activated by the 84th Congress to do research in this general area, the others being the U.S. Office of Education and the National Institutes of Health.

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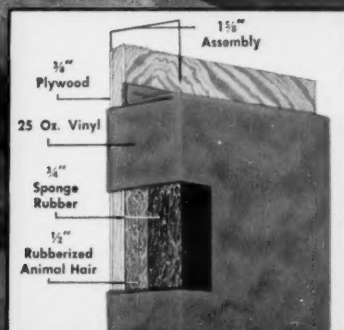
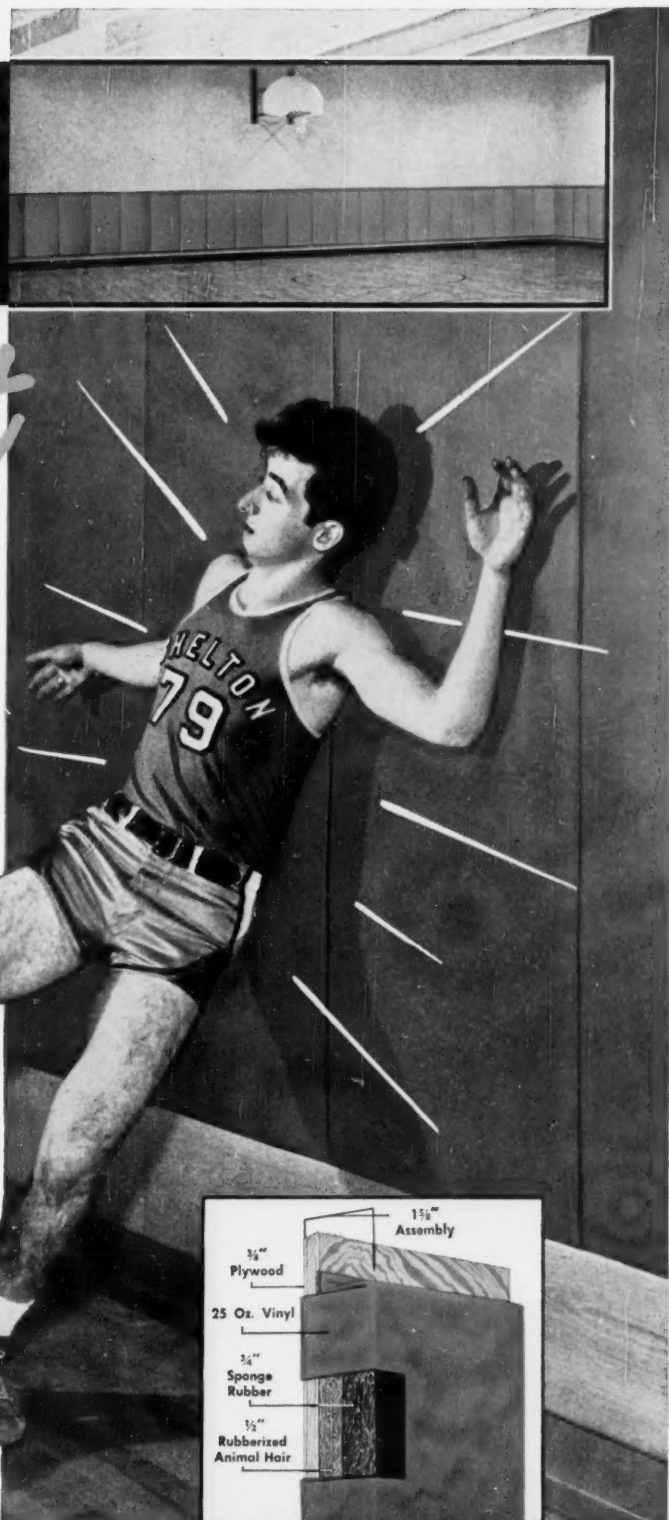
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A new development—already proved in scores of schools everywhere—designed especially to guard against injuries from body impact against walls of multi-purpose play rooms and gymnasiums.

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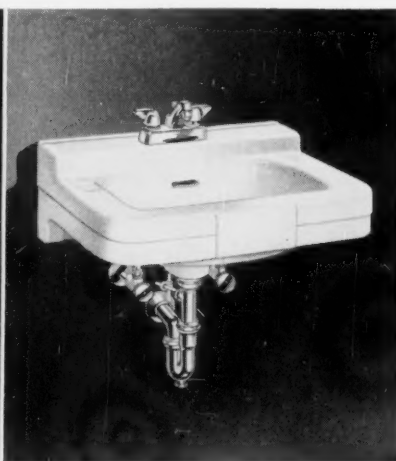
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NEWS IN REVIEW

N.A.M. Says Fund Drive Can Meet School Needs Locally

NEW YORK. — The National Association of Manufacturers is urging its membership to take the lead in a nationwide drive to help school systems "obtain locally the funds they need to meet all legitimate requirements."

Cola G. Parker, association president, in an open letter to 21,000 businessmen, pointed out that, although the school aid bill was defeated by Congress, the needs it was designed to meet still exist. If America's businessmen spearhead a movement to raise the standards of public education and to obtain adequate budgets for local schools, these needs can be met at the local level, he said, and the schools will remain responsive to the will of communities, rather than coming under "the control and direction of federal bureaucracy."

American Education Week to Be Held November 11 to 17

WASHINGTON, D.C. — Sponsors of American Education Week, to be observed this year November 11 to 17, have urged administrators to make an early start in planning the week's observances. "Schools for a Strong America" will be the theme of the week.

Daily topics for emphasis on consecutive days have been announced as follows: Our Spiritual and National Heritage; Today's Education—Tomorrow's Democracy; Schools for Safe and Healthful Living; Schools for Trained Manpower; A Good Classroom for Every Child; National Teachers Day; Schools for a United America. Materials for planning are available from N.E.A. headquarters, 1201 16th St., N.W., Washington, D.C.

School Board Resolution Bars Graduates of Teachers Colleges

PHOENIX, ARIZ. — A resolution prohibiting the employment of graduates of teachers colleges to teach liberal arts subjects has been approved by the board of education here. Applicants for these positions must hold a master's or a doctor's degree from a liberal arts college.

The board president, Frank Haze Burch, described the resolution as an "open criticism of teachers colleges, at least in that the education departments in various teachers colleges have become the tail that wags the dog." According to Mr. Burch, it will take from five to ten years before the policy is 100 per cent effective in the city's five high schools and Phoenix Junior College.

Dr. Trevor G. Browne, board member who instigated the change, said: "College graduates going for their master's degrees [in education] were studying more and more about less and less." In such subjects as mathematics, science and history "teachers don't know as much as their students," he added.

L.A. Board Votes \$50,000 TV Project; Declines Ford Funds

LOS ANGELES. — The board of education here has approved plans for a \$50,000 experimental educational TV program to be initiated in September 1957. Board action followed disagreement on the advisability of requesting a \$250,000 Ford Foundation grant for a three-year educational TV experiment.

Present plans call for a television teaching operation which would connect four junior colleges by coaxial cable. Classroom work will be televised from one college to the other three.

A project proposed by the Ford Foundation's Fund for the Advancement of Education would have linked the Los Angeles school system with New York and Chicago schools via television. The Fund dropped negotiations when the board did not unanimously approve the project.

Edith K. Stafford, president of the Los Angeles board, cast the original dissenting vote against the Fund project. She declared she was opposed to accepting funds from outside sources for curriculum matters.

"Essential Ideas Seminar" to Be Given at High School

BRIARCLIFF MANOR, N.Y.—Truth, beauty and goodness will be among the ideas studied by a group of gifted high school seniors here next spring.

At that time, Briarcliff High School plans to initiate a 15 week "Essential Ideas Seminar" based on films of "Great Ideas" lectures by Mortimer Adler.

The films, produced by the National Education Television Center at Ann Arbor, Mich., will serve as a starting point for exploring the ideas through discussion, lecture and reading in the experimental program.

Edward Moyer, district principal of Briarcliff Manor, who first proposed the course, described its aims as follows: to give experience in dealing with abstract ideas; to encourage independent reading in primary sources; to stimulate the desire for intellectual experience in college, and to provide seniors with an introduction to the college type of learning situation.

The experiment is underwritten by an initial renewable grant of \$13,000 from the Ford Foundation's Fund for the Advancement of Education.

Curriculum Association Announces Conference Theme

ST. LOUIS.—"Education for the Future: Appraisal and Planning" will be the theme of the 12th annual conference of the Association for Supervision and Curriculum Development to be held here March 17 to 21.

Plan International Workshop for School Business Officials

PHILADELPHIA. — Plans for the first international workshop for school business officials, to be held in the summer of 1957, have been announced. The one-week conference will be sponsored by the Wharton School of Commerce and the school of education of the University of Pennsylvania and the Association of School Business Officers of the United States and Canada.

Two semester hours of credit will probably be given for conference participation. Professors at the University of Pennsylvania and practicing school business officials will comprise the faculty.

Sponsors hope the workshop will be the first in a three-year sequence for which a certificate of achievement, in addition to six semester hours of credit, would be awarded.

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New Kind of Merit Rating Proposed by New England Study

CAMBRIDGE, MASS.—A new method of determining teachers' salaries on the basis of competence is presented in a recent report by the merit salary committee of the New England School Development Council. The report is a summation of a nine-year study of the problem of merit rating.

The merit system proposed by the committee is based on three rôles which the teacher plays—in relation to her pupils, the school system, and the profession. Merit is determined by the ability of the teacher to serve in the three rôles.

The salary schedule suggested by the committee begins at \$3400 and rises to \$8900 as the teacher reaches maximum professional competency. It is estimated that the teacher reaches satisfactory classroom performance within three years; the competent teacher would progress to the school rôle in the eighth year and the professional rôle by the thirteenth year.

The proposed merit salary schedule can include increments based on each successive year of service, but the committee favors a single salary for each rôle. For satisfactory performance of the classroom rôle the teacher would receive \$5900; for the school rôle, \$7900, and for the professional rôle, \$8900.

The advancement of the teacher from one rôle to another would depend upon a favorable vote of an evaluation committee, comprised of three teachers, three administrators, and one school committee member. The evaluation committee would confer with and interview the teacher and submit recommendations in regard to advancement to the school committee. The teacher himself would be expected to apply for evaluation and advancement.

The report also analyzes the preparational and positional types of salary schedules currently in use, and considers in detail the experience in New York State, where the merit system was adopted in 1947 and subsequently abandoned.

Location More Important Than Salary to Teachers

NEW YORK. — School boards may be surprised, but in the opinion of teacher placement officers in 36 states, location of a school is more important than salary to a competent teacher who is choosing a job.

A study made by Willis J. Black of the placement office of Teachers College, Columbia University, showed that salary ranked second in importance to job seeking teachers. Other equally important factors are: good living and working conditions in the school and community and good community attitudes toward teachers.

Other factors considered important are: personnel policies such as retirement provisions and tenure; personality of the interviewing officer; reputation of the school; cultural opportunities; socio-economic level of the community; available housing; class size; opportunities for advancement; inservice training facilities, and literature about schools and town.

Dr. Black pointed out that the relative importance of these factors varied considerably with individuals.

Reading Too Easy to Be Enjoyable, Educator Claims

ANN ARBOR, MICH. — It's no wonder Johnny doesn't like to read—children's reading is too easy, according to Frances C. Sayers, a former librarian in New York City. Addressing

the 27th annual education conference at the University of Michigan, Mrs. Sayers said that much reading for children has been made so easy that it isn't enjoyable any more.

"We rob the children of the initial enjoyment of wrestling with reading," she said, "by making all the words too simple and making the sentences too short and saying too little and feeling nothing at all."

Two in New Harvard Post to Teach Courses via TV

CAMBRIDGE, MASS. — Harvard University gives a professional nod to educational TV this year by establishing the post of Lowell Television Lecturer. Two professors will be appointed to the post each year, to give courses over Boston's educational TV station, WGBH.

The lectureships are being established "to record for television a college course of instruction selected both for its intellectual content and for the excellence of its manner of presentation," said President Nathan M. Pusey. The program will be conducted on a three-year trial basis.

Education Is Key to Manpower Problems; It Must Become More Career Oriented, Report Says

WASHINGTON, D.C. — America's manpower shortage cannot be viewed as a sheer lack of numbers. It is primarily a shortage of highly trained qualified persons in areas critical to the country's welfare.

The rôle of education is basic to upgrading the labor force to meet these urgent manpower needs, states the N.E.A.'s Educational Policies Commission in its recently published report, "Manpower and Education."

The commission believes that education must become more career oriented to prepare individuals for responsible, intelligent vocational decisions. Educational preparation must include understanding of the characteristics of the manpower situation; adequate training for careers in the broadest sense, and self-understanding in relation to possible occupations.

Almost all occupations facing critical shortages today (scientific research, engineering and technology, health services, executive and supervisory fields, and education) require individuals who are college graduates. Guidance and counseling programs and the education of the gifted must be greatly increased in scope, so that

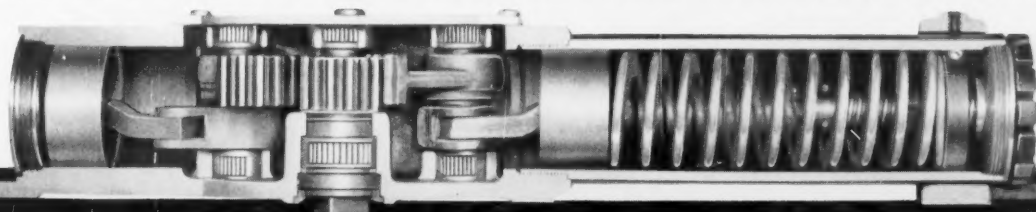
all young people are encouraged to maximum development of their abilities.

The newly emerging group of semi-professional occupations also demands new training programs. Schools and colleges should give special attention to improved post-high school curriculums for this group. Regional vocational schools and institutes, along with programs developed cooperatively by education, management and labor, are needed, the report states.

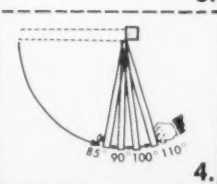
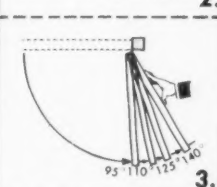
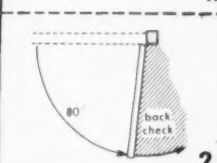
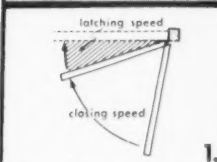
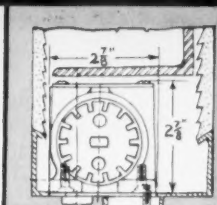
Concern with careers is in no way opposed to liberal education, the report points out. Vocational interest gives focus and direction to general education. Vocational education must not be narrowly conceived but must prepare the individual for maximum growth and flexibility in the career of his choice.

The commission emphasizes that an adequate solution to the manpower situation can be developed only through long-range and continuing study. Population changes, foreign policy commitments, and technological advances are only a few of the factors contributing to wide variation in manpower needs and opportunities.

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Asserts Adequate Professional Training for Teachers Basic to Solution of All School Problems

PARKLAND, WASH. —A single answer to problems of teacher shortage, school finance, and public criticism of education can be found in the improvement and amplification of teacher education, according to Arthur F. Corey, state executive secretary of the California Teachers Association.

"The bitter criticism of public education and of teacher education will be met only when the public is convinced that the teacher has undergone

a period of intellectual discipline comparable to that of our other recognized professions and hence is qualified to prescribe on educational problems," Dr. Corey told more than 600 delegates to the 11th annual conference sponsored by the National Commission on Teacher Education and Professional Standards of the N.E.A. here.

"The teacher shortage can be answered only through a program of preparation which challenges our best

young people and which through its length and rigor stamps those who are able to complete it as competent professionals," he said. "Real professional salaries can be achieved only when teachers enjoy adequate professional preparation."

Timidity or incompetence on the part of the teacher makes him subject to ever increasing control and pressure from society, Dr. Corey added, so that there is real danger that teachers in America today may lose their right to teach creatively. "The gravest peril to academic freedom comes not from the misguided public but from teachers who, from ineptness and ignorance, are not worthy of it."

The professional training visualized by Dr. Corey would begin with four full years of work in language, literature, science, mathematics, history, fine arts, sociology and political science. Professional specialization in education would then be given in two years of graduate work where continuous laboratory experiences would bring together the theoretical and practical aspects of training. An additional year's study would be required within the first five years of teaching and would lead to a Ph.D. in education. Work for the doctorate would be patterned around practical professional ability, as is professional training in medicine. Those who can qualify for this kind of graduate program should be subsidized at governmental expense, Dr. Corey believes.

He criticized existing personnel practices under which the teacher is not treated as a true professional but his activities are supervised closely. "If teachers were competent to handle the educational problems which develop in their pupils, a truly professional faculty might well be organized as is a good hospital staff or a faculty in a modern college." Perhaps the individual school faculty might elect its own chairman who would administer physical details of management, leaving the basic educational direction to the group and its committees, he suggested.

The existing programs of teacher education are "very, very young," Dr. Corey said, and have made unbelievable progress. But "teacher education cannot lift itself by its own bootstraps." The responsibility for improving these programs must be carried by the best ability and total resources of the teaching profession, he said. "We should

(Continued on Page 126)



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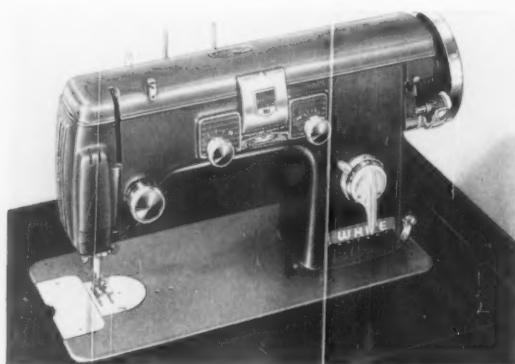
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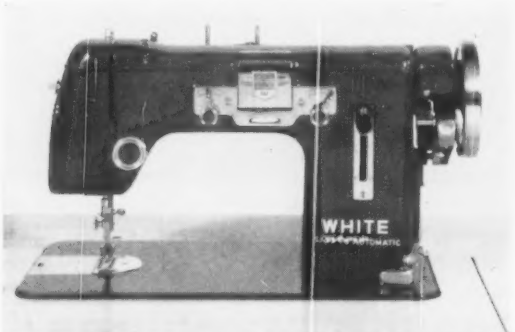


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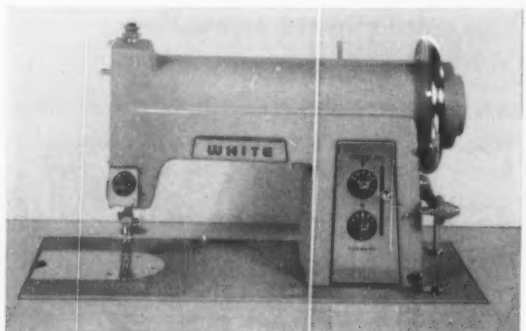
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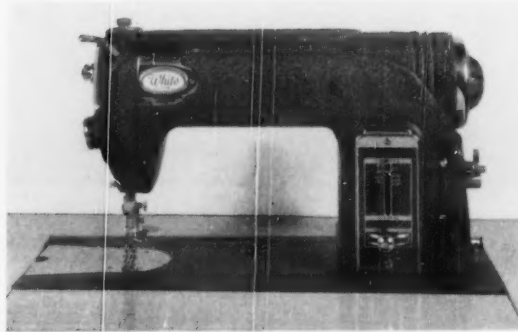
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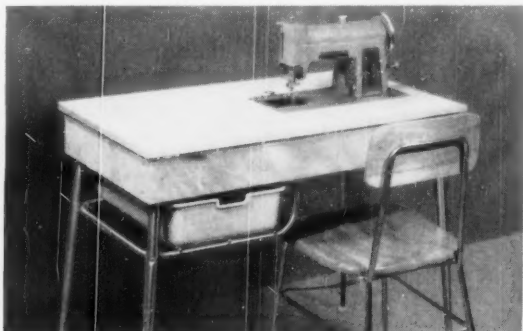
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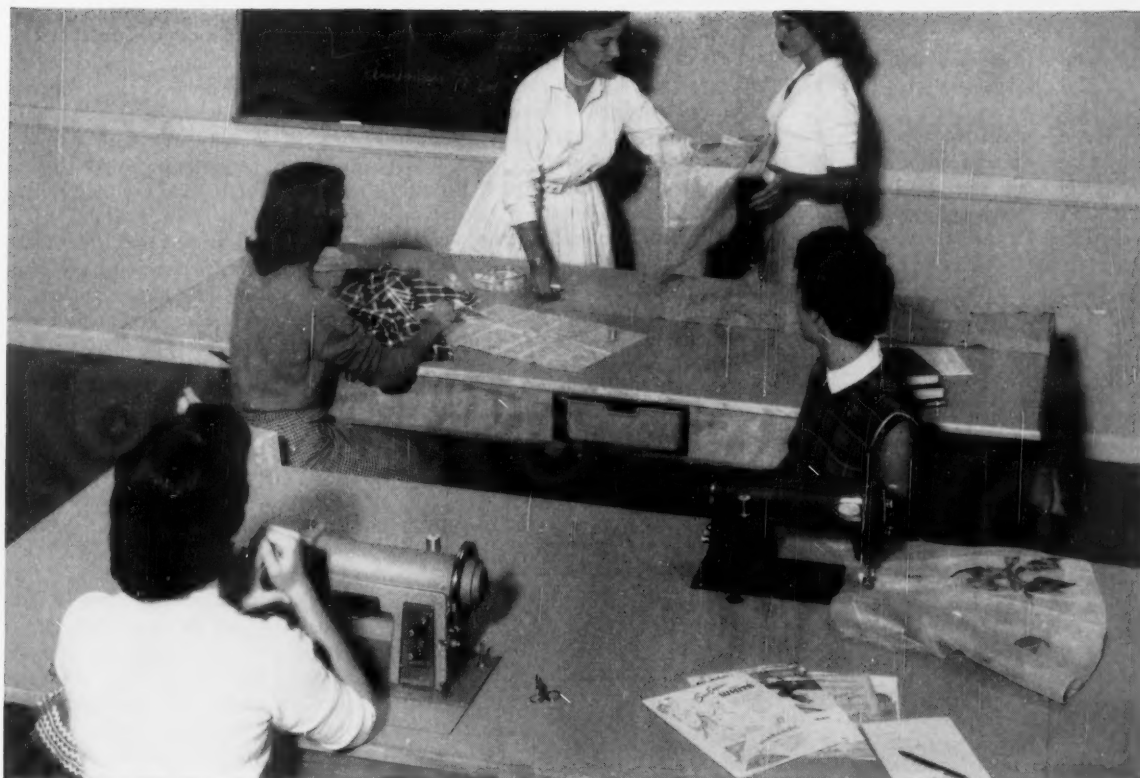
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(Continued From Page 122)

neither expect nor permit those engaged in teacher education alone to decide how far and in what direction we are to move in this field."

Another speaker at the conference named the "wrong kind of selectivity" of teacher candidates as a basic weakness in the teaching profession. "In most school systems, the teaching service presents an attractive appeal to the person who merely wants a job with a good income for a few years, and wants to prepare for it with the least effort and inconvenience," said

Ralph W. McDonald, president of Bowling Green State University. The practice of paying too high salaries to beginners and too low salaries for qualified teachers of long experience can destroy the teaching profession, he added.

Dr. McDonald also stated that the almost universal weakness of teacher preparation programs was in "the shallow and inadequate education of the individual as a person, as a citizen, and as a trustee of the learning of mankind and the basic tenets of Western civilization."

Problems of Principalship Studied at Chicago Conference

CHICAGO. — Administration exists in the schools only to assist teachers to provide leadership and to develop their own powers. A classroom is not a military organization in which precision and uniformity are the primary goals.

These administrative principles were described by Benjamin C. Willis, superintendent of Chicago schools, at a recent conference on the problems of the principals held at the University of Chicago.

Dr. Willis pointed out that regulation, responsibility and discipline are essential to the classroom and to the school system, but, he said, they are only means to providing freedom for the individual to grow and develop.

Another speaker, Ralph W. Tyler, director of the Center for Advanced Study in the Behavioral Sciences, Palo Alto, Calif., said that American schools are judging the educability of children in the wrong way. Tests of scholastic ability and intelligence emphasize middle class vocabulary and problems, he said, so that they tend to answer only the question: "Which children can do well in our schools as we now conduct them?"

He pointed out that problem solving ability is not limited to children in any particular social class. American education should ask the question: "Which children have abilities and how can we teach them to develop and make them effective?" Attention should be centered on helping the student gain greater competence in solving problems, he added.

A population expert told conferees that, along with rapid expansion, schools must meet one of the greatest challenges in their history—that of the rapidly changing population composition of large metropolitan centers.

Phillip M. Hauser, professor of sociology and director of the Population Research Training Center at the university, said that large numbers of rural Negroes from the South, as well as immigrant Puerto Ricans and Mexicans, are coming to the cities, many of them completely unprepared for urban living.

The speed and ease with which these groups can become a part of the communities into which they move depends largely upon the ability of the schools to help urbanize and prepare them for full participation in the American way of life, he said.



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General Mills announces the Betty Crocker Search for the American Homemaker of Tomorrow 1956-57

A national program to call attention to the importance of schools in American society and to assist them in their all-important work of building in young women a deeper appreciation and understanding of the home as it affects our society and economy; to emphasize through a sound scholarship award program the personal qualities and sense of values necessary to successful homemaking; to select for scholarships girls who are representative of these qualities.

More than 256,000 senior girls in over 10,000 public, private, and parochial high schools participated in last year's Betty Crocker Search for the American Homemaker of Tomorrow. General Mills is again offering the opportunities of this educational program to the nation's young women in 1957.

The Betty Crocker Search has won the praise of educators as an outstanding project in behalf of American youth, schools, and the home. It is planned to help both teachers and students without adding a burden to school programs.

Rewards:

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Two scholarship winners in every state and the District of Columbia.

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The National Association of Secondary-School Principals has placed this activity on the Approved List of National Contests and Activities for 1956-57.

Reader Opinion

(Continued From Page 10)

schooling, with notable success. First, it is necessary to complete a standard four-year college course leading to the baccalaureate degree (usually A.B. or B.S.). Then it is necessary to engage in an added period of study and research for a period of three or more years. Some students qualify for the master's degree during this period of graduate study, but the master's degree is not necessarily a prerequisite for the doctorate in the American academic system.

Some amount of original research is

necessary, however, and each candidate for a doctorate must write a dissertation or some other paper of equal importance. In many cases it is necessary to serve some kind of an internship, not necessarily in a hospital as the medical students do but in some similar situation within the special field being studied.

As a final means of qualifying, every candidate for the doctorate is subjected to a long and intensive period of oral examination on the subject which has been of major importance during the period of his own graduate study.

When, and if, the faculty of the university is convinced that a candidate for the doctorate is properly qualified for the degree, there are certain fees that must be paid. Then the degree is awarded, usually at commencement time.

It will be apparent that obtaining a doctorate is a long process, which includes many hurdles and barriers. Many who start along the course never reach the coveted goal. But those who succeed become doctors, no matter what their field of specialization may be. They are just as much entitled to that title as are the physicians, surgeons and dentists.—SAMUEL ENGLE BURR Jr., chairman, department of education, The American University, Washington, D.C.

Adult Educators to Meet; Announce New Officers

ATLANTIC CITY, N.J. — Problems of attaining maturity in our society will be studied by delegates to the annual conference of the Adult Education Association here, November 10 to 12. Psychiatrist Dr. John C. Whitehorn of Johns Hopkins University School of Medicine and Sociologist Edmund de S. Brunner of Columbia University will address the group.

Elbert W. Burr of St. Louis was recently elected president of the association. Other officers are: president-elect, Grace T. Stevenson, associate executive secretary of the American Library Association, Chicago; vice president, Charles S. Johnson, president of Fisk University, and secretary-treasurer, Winifred Fisher, executive director of the New York Adult Education Council.

School Popular With Most Teen-Agers, Survey Shows

CHICAGO. — The majority of teen-agers do like school, and many of them worry about how well they are doing, a survey made by the Purdue Opinion Panel of Purdue University indicates.

Seventy-nine per cent of the 15,000 teens polled reported that they enjoyed school. Fewer than 13 per cent said they dislike their courses, hate school, or would like to drop out.

In fact, 54 per cent worry because they don't know how to study better, and 56 per cent wish they could be calmer when reciting in class. Only 20 per cent complained of too much homework. (Continued on Page 130)



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FOR YOUR SCHOOL

MIDWEST FOLDING TABLES

Midwest offers you a complete line of folding tables for every school need. Easy folding! Compact storage! Beautiful tops! Featuring the famous Du-Honey 20 safety lock—positive protection in both the folded and the extended position. All-welded construction! Reinforced recessed steel apron. Improved leg design for added sitting comfort! Your choice of styles and a wide range of sizes.



TABLE & CHAIR CADDIES

Save time and effort! Reduce noise and confusion! Solve your problem of moving and storage of your folding tables and chairs with a Midwest Caddy. Designed to handle all types of folding chairs and any size table. Built for rugged service. Smooth rolling rubber caster wheels for effortless handling.



PORTABLE FOLDING PLATFORMS

A heavy duty folding platform for auditorium, gym and multi-purpose room use. Size 4 ft. x 8 ft. Choice of 5 different heights. Du-Honey 20 automatic leg locks 3/4 in. plywood top. Folds compactly.



CHORAL and BAND STANDS

Folding portable choral and band stands available in 18" or 36" widths; straight or tapered end styles; in range of 4 different heights. Folds easily, stores compactly.



TABLE & CHAIR CADDIES

Save time and effort! Reduce noise and confusion! Solve your problem of moving and storage of your folding tables and chairs with a Midwest Caddy. Designed to handle all types of folding chairs and any size table. Built for rugged service. Smooth rolling rubber caster wheels for effortless handling.



MIDWEST PORTABLE FOLDING STAGE

A new self-contained portable folding stage that's ideal for classroom use. Makes a strong spacious stage 8 ft. x 11 ft. 8 in. Entirely self-contained—no loose parts—no tools needed to set it up. Can be folded in a few seconds and moved from room to room. When folded is 8 ft. x 19" x 39". Equipped with easy rolling swivel casters with hard rubber tires. Patented safety locks. Extra heavy center supports.



Write today, for complete catalog!

Midwest

FOLDING PRODUCTS SALES CORP.
Dept. 769 ROSELLE, ILLINOIS



*Experienced
Hands*

of the *Hillyard* Maintainer[®]

can uncover Big Savings

in Your Floor Maintenance Program

1957

MARKS OUR
50th Year
OF SERVICE



ST. JOSEPH, MO.

PASSAIC, N. J. SAN JOSE, CALIF.

*Branches and Warehouses in Principal Cities
(over)*

why save pennies
when you can save dollars!

95¢* of Every Floor Maintenance Dollar IS SPENT FOR LABOR

* Office Building Records show that maintenance of a square foot of rentable floor space costs, on the average:

42¢ per year for **LABOR**
2.2¢ per year for **SUPPLIES**

This is clear-cut confirmation! Your real chance to save money in floor maintenance is in the **BIG 95¢** out of every maintenance dollar that goes for **LABOR**.



—ONLY 5¢
for Supplies!

A Hillyard FLOOR TREATMENT PLAN CAN CUT LABOR COSTS UP TO 50%

Hillyard specialized Floor Treatments may cost a few pennies more, but they will save you many dollars. Finest quality materials and specialized treatment methods make application easier, give longer wear, eliminate whole steps of treatment. For example, you can:

ELIMINATE the whole operation of rinsing with Hillyard Super Shine-All neutral chemical cleaner.

SAVE 3 waxings out of 4 (required by inferior products) with Hillyard Super Hil-Brite 100% Carnuba Wax.

GAIN greater wood floor wear and **SAVE** expensive refinishing with Hillyard Wood Finishes—they have as much as 3 times the abrasion index of any other product on the market.

END all need for waxing of terrazzo and concrete with Hillyard Super Onex-Seal.



Charles Rose, Jr.
Second Generation
Hillyard "Maintainer"



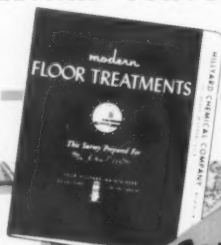
Here's One of the
130 Men Who Are
"MAKING
THIS PLAN
WORK"

Don't buy "janitor supplies," then wonder how to use them. Save money and time by buying a *treatment plan*, supervised and serviced by the Hillyard Maintainer®. He will gladly train your custodial staff in most efficient methods. That's why we say he is "On Your Staff, Not Your Payroll".

Use Products Approved by Flooring Manufacturers and Contractors

ASK FOR A FREE HILLYARD SURVEY

The Hillyard Maintainer® will survey each of your floors, and recommend a *comprehensive, specialized* treatment plan tailor-made for each—to give you the utmost in protection, appearance, sanitation, economy. No obligation!



Send today
for a **FREE**
FLOOR TREATMENT
SURVEY

HILLYARD CHEMICAL CO.
St. Joseph, Mo.

Praise for Hillyard Performance

from an Architect:

"Your help will not be forgotten soon! Please know that I am deeply grateful for your personal interest in the job and for getting us out of the 'jam'. Your products will not suffer as a result of the experience."

from a Building Superintendent:

"I also want to commend the wonderful service rendered us by your Maintenance Consulting Engineer in our area. His advice and interest have been most helpful, and his friendly and efficient service is greatly appreciated. We are very glad we discovered your fine floor products."

from an Institutional Administrator:

"We have found the advice and assistance of the Hillyard Maintainer in our territory to be honest and sound at all times, and not in any way prejudiced on making a sale. We are glad to endorse heartily both the Hillyard products and service. Our experience with these products bears out the old saying that 'the best is cheapest in the long run'."

HILLYARD CHEMICAL CO.
St. Joseph, Mo.

Please have your nearby Hillyard Maintainer show me how I can save real money on floor care.

Name _____ Title _____

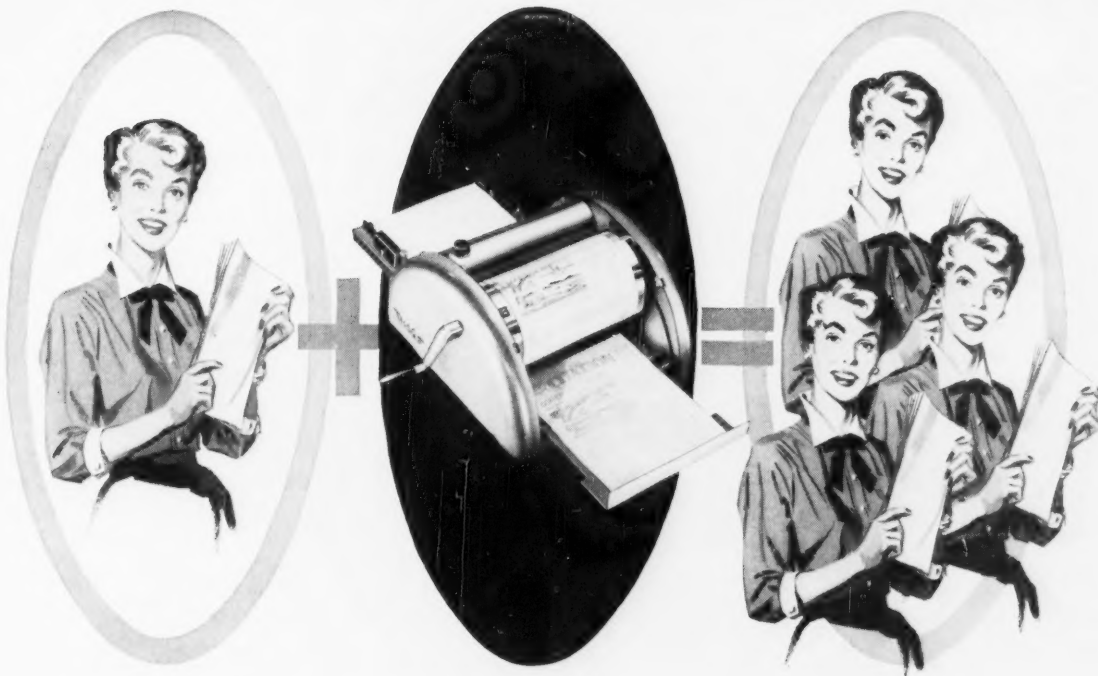
Institution _____

Address _____

City _____ State _____



One teacher plus DITTO[®] equals more teachers



Welcome help for teacher shortage

The teacher shortage threatens to become worse. The mounting birth rate promises to increase school enrollment tremendously. Even with increased state and federal funds, there is still a grave question of whether trained teachers can be turned out fast enough to meet the probable demand.

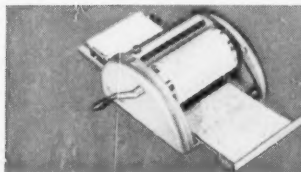
DITTO and DITTO Workbooks provide an immediate and practical way of easing the teacher shortage.

Together they cut the time required for lesson planning and preparation—give the teachers more time to teach—free teachers for actual classroom instruction—virtually add more teachers to your staff.

And together they boost teacher morale—give your teachers more time for themselves—more time for self improvement—more time for relaxation—more time for doing the things they want to do.

For help in easing the teacher shortage.

MAIL COUPON NOW



THE NEW DITTO D-10

Easiest to operate of them all—always ready to turn out up to 300 or more bright copies, 120 per minute, in 1 to 5 colors, at once, of anything typed, written, traced or drawn... No stencil, No mats, No inking, No make ready... Any size paper from 3" x 5" to 9" x 14"... at just pennies in cost... Reset counter, magic copy control.



59 NEW DITTO WORKBOOKS

... For Reproduction on Liquid Machines. An outstanding DITTO service for lightening the teaching burden in every grade and every subject. Written by teachers—edited by nationally recognized educators. Each \$3.25. Choose from any of the splendid new titles in the DITTO Workbook Catalog. Send for free sample copies.

THE DITTO D-10 IS ONLY 1 OF 3 DUPLICATORS DESIGNED FOR SCHOOL USE... PRICES TO FIT TODAY'S OPERATING BUDGET... READY FOR INSTANT REPRODUCTION OF...

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DITTO, Incorporated
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Gentlemen:
Without obligation, please:

- ☐ Send Literature on your new D-10 Liquid Type School Duplicator.
- ☐ Send FREE: Samples and catalog of new Workbook Lessons.
- ☐ Arrange DITTO Demonstration for me.

Name _____

School _____

Address _____

Post Office _____

County _____ State _____

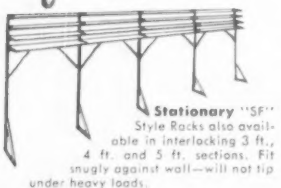
Checker COAT and HAT RACKS

Leading architects and outfitters specify Checker Wardrobe Equipment to save space and hold wraps in an efficient, sanitary and orderly manner. Hats rest on high ribs in slotted shelves. Spaced hangers keep coats apart, open to light and air, visible and instantly available. "Portable" units go wherever needed on large casters. "Stationary" units come on glides and can be anchored to floor. All are correctly engineered to interlock on left or right and to stand rigidly. They will never tip over, sag, sway, creak or wobble. Built for lifetime service of strongly welded heavy gauge steel and square tubing. Beautifully finished in modern baked enamel finishes. They are vermin-proof and fire-proof.

Exclusive Checker Features



Portable "SF" Style
Rack on casters hold 4 or 5 hats and coats per foot—3' 2"—4' 2"—and 5' 2" units.



Stationary "SF" Style
Racks also available in interlocking 3 ft., 4 ft. and 5 ft. sections. Fit snugly against wall—will not tip under heavy loads.



New "on hook" tags eliminate checking errors, speed service and prevent empty hangers from being knocked off bar.



New add-on feature—shelves spring-lock to right or left of bracket arms to make racks of any desired length.



New beautifully embossed lucite numbers snap onto shelves. Each hat and hanger space is numbered.



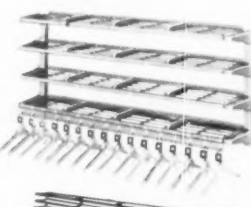
Checker Coat Racks can be quickly converted from hanger type to hook type.



Portable "DF" Style
Rack on large B.B. casters. Holds 8 or 10 coats and hats per foot—3' 2"—4' 2"—or 5' 2" lengths.



Stationary "DF" Style
without casters or cross braces. Units lock together to make continuous double faced rack of any length. Allow 2" for end columns, 3/8" for intermediate columns.

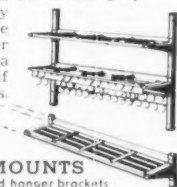


WALLMOUNTS

"WM" Wallmounted Racks in 3 ft., 4 ft. and 5 ft. units serve as independent racks or interlock to make continuous wall racks. Accommodate 4 or 5 persons per foot.



Corkboard [hooks or hangers]



WALLMOUNTS

Shelves and hanger brackets adjustable for height on columns which attach to wall.

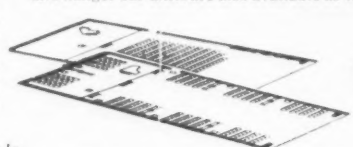


Chalkboard [hooks or hangers]

"Before and After" floor plans showing how Schooline Wardrobe Racks not only solve the wraps problem in the fellowship hall, but can also be used to divide space into several classrooms.

Schooline* Flexible WARDROBE SYSTEM

A completely flexible System of Multi-purpose wardrobe units that not only answer the student wraps problem but also serve as chalk boards, cork boards, room dividers, screens, etc., while adapting to any school situation or floor plan. Comprising wardrobe racks with adjustable height hat shelves and hanger bar, and off-the-floor overshoe shelf, backed with a 50"x48" Chalk board or Cork board. Matching shelf and hanger bar units are also available as Wallmounts.



Manufactured only by

VOGEL-PETERSON CO. 1127 W. 37th Street Chicago 9, Ill.

Write for Bulletin CK-25

(Continued From Page 128)

The group surveyed was selected by age, economic status, social grouping, sex, religious background, and geographic location to be a representative cross section of American youth.

Reflecting more seriousness than they are often given credit for, 56 per cent of high school students are seriously worried about finding vocations for which they are best suited, and 59 per cent wonder how much ability they really possess.

The prospect of college also plagues a sizable group—42 per cent are concerned about their ability to do college work, and whether to go to college troubles 33 per cent.

Out-of-Date Machines. A survey of the needs of New York City's vocational schools has been ordered by Charles H. Silver, president of the board of education, on the basis that much of the high schools' equipment may be obsolete. Mr. Silver said he had been told that in some schools machines were from 40 to 50 years old.

TV and N.E.A. "Youth Wants to Know," an N.B.C. forum TV show on national and international affairs, will be produced hereafter in cooperation with the N.E.A., Theodore Granik, producer of the show, has announced.

Ford Money for Faculties. Checks totaling \$130 million were mailed last month to 630 privately supported colleges and universities as the first installment of Ford Foundation grants designed to help raise faculty salaries.

Seventy-five per Cent. Three out of four households in the United States have one or more TV sets, a sample survey by the Census Bureau indicates. In 1955, 67 per cent of households had television sets.

By Degrees. Archbishop Joseph Francis Rummel, whose declaration that segregation is "morally wrong and sinful" sparked lively controversy in Louisiana, has announced that integration in the Catholic schools of New Orleans will be delayed for at least one more year. "Certain difficulties still remain, and we are not now prepared to introduce integration generally," he stated.

A Station Wagon Is a Bus. Under a new state law, all vehicles used by private agencies for transporting children to educational institutions in New

(Continued on Page 134)

Build Brighter Futures, Electrically

To build schools that stay modern with growth, within today's budgets, wise planners call on architects and consultants for electrical ideas in the earliest possible stages. Westinghouse, where everything electrical is available in one integrated line, provides specialists to aid in such basic engineering.

Because of the vital influence of environment on future bankers, brides and ballplayers, every detail of school electrical construction, from kindergarten on, merits this protective planning. Visual perception, at work or play, depends on the quality of classroom lighting . . . dependability of motors and power equipment is vital to economical school maintenance . . . expanding education in technical skills calls for more and more electrical apparatus.

Careful consideration of these vital details *before* final blueprints are approved can lead to worth-while savings of public funds.

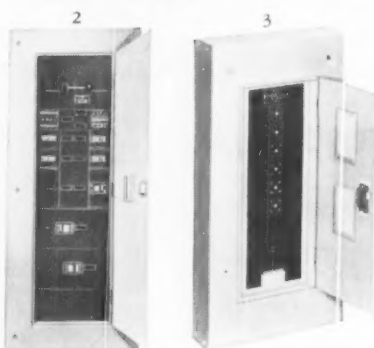
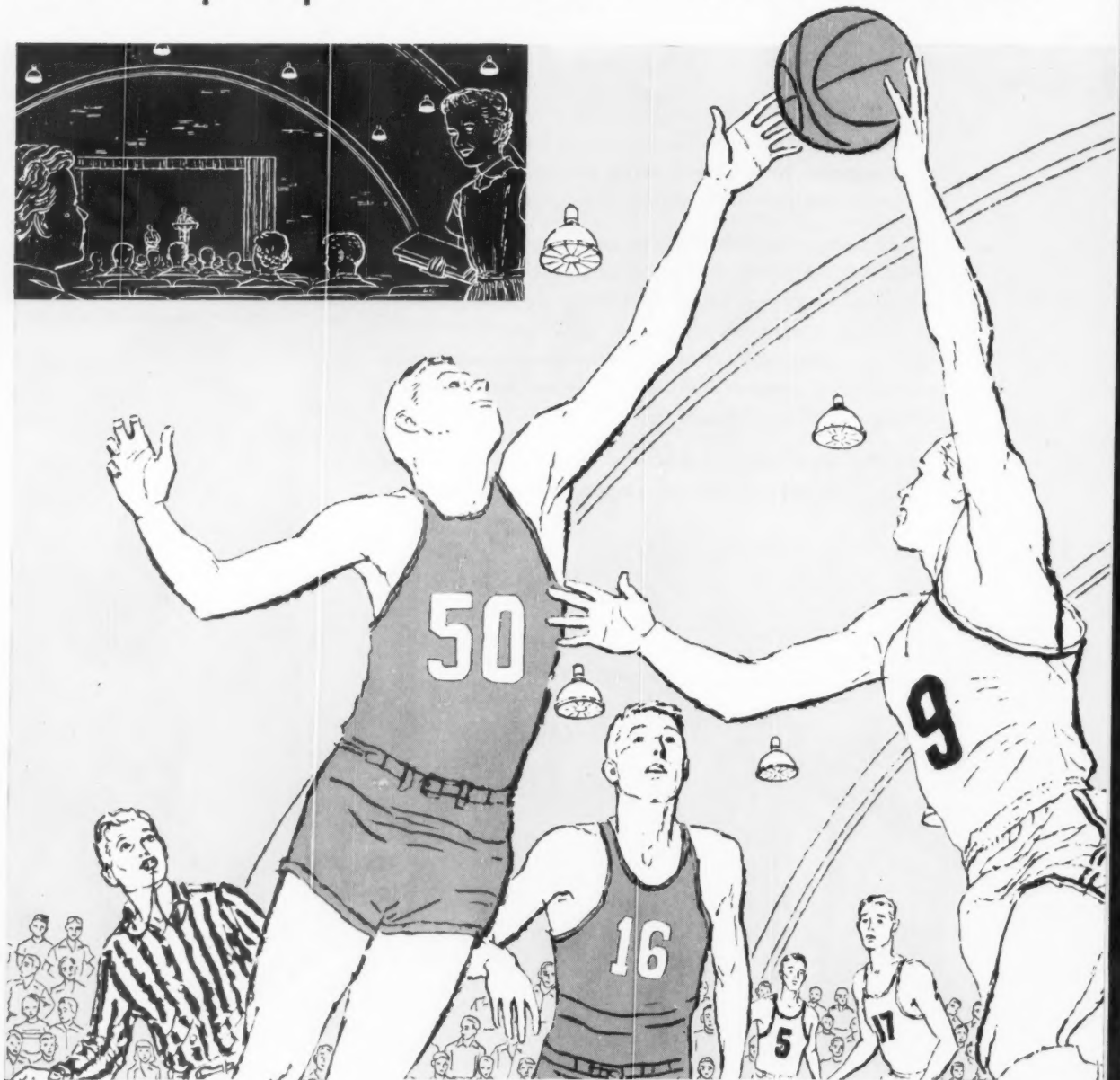
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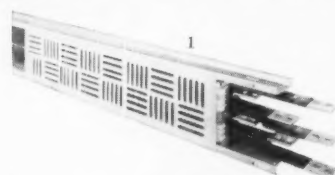
WESTINGHOUSE

GUIDED PLANNING CAN
HELP YOUR SCHOOL
PROGRAM . . .
FOR EXAMPLE . . .

Multi-purpose areas...one answer



The type of "blocks" with which your power system would be built depends upon departmental requirements. In every case, a totally-enclosed power panel protects equipment and personnel, provides for infinite distribution patterns . . . the safest, fastest method of distributing power is by Westinghouse bus duct. (1) Installation is fast; impedance is low; protection is complete. In power areas, the power panel-



board (2) protects equipment against overloads, meets changing power requirements.

For room-by-room switching, circuit breaker panelboards (3) provide sure protection, restore service quickly after power interruptions.

to "EXPANDING SHRINKAGE" of school budgets!

Anyone associated with school construction today knows that vastly more is being budgeted, yet the square footage returned is shrinking with each project.

It's a tough trend. Takes realistic engineering to meet it. That's one of the factors that makes Westinghouse electrical equipment a joy to the practical planner . . . realistic engineering to fit the changing needs.

Specifically . . . school lighting of multi-use areas. The gym doubling as an auditorium . . . the cafeteria-meeting-room combination. Fixtures like those illustrated below adapt to all purposes. One room becomes two. A gain is made in footage per dollar.

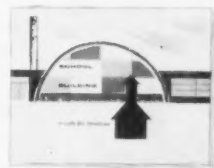
Block-built power distribution equipment cuts installation cost, occupies a minimum of precious space, provides multiple services.

There's a Westinghouse electrical construction specialist as close as your telephone, ready to help your architect and consultant help you stretch your school budget. Call him. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-94054-A

FREE BOOK

Write for your copy of the new Westinghouse school planning book, B-6521. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.



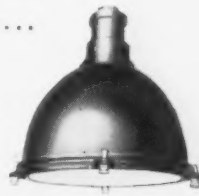
Westinghouse Lighting for the Multi-Purpose Area . . .



1. Ventilated aluminum high-bay luminaire permits precision control for varied lighting in dual areas. Available with wire guard.



2. Millite® luminaire is completely enclosed for service both inside and out of doors. It provides a choice of light distribution.



3. FPCA fluorescent luminaire, adjustable positioning provides the desired degree of illumination for each requirement in your multi-purpose areas.

WATCH WESTINGHOUSE!

COVER THE PRESIDENTIAL CAMPAIGN ON CBS TV AND RADIO!

(Continued From Page 130)

Jersey will be designated as school buses and will be subject to state regulations governing the latter.

Emergency Cases. Money from the Puerto Rican government's special emergency fund will be available to finance the education of children whose families cannot afford to help them, under a new law which aims to guarantee an elementary, high school, and college education to the country's most promising children. The emergency fund is an annual appropriation of \$10 million set aside for use in the event of a disaster.

Differential. A recent study of the U.S. Office of Education shows that cities with a population of 100,000 or more have larger current expenditures per pupil in their public schools than do cities of from 25,000 to 100,000. For the former, the average is \$310 a year and \$1.71 per day; for the latter, \$262 and \$1.47.

Savings Head. Andrew D. Holt, vice president of the University of Tennessee and a past president of the N.E.A., has been appointed volunteer chairman of the Treasury's National

School Savings Committee. The committee aids the Treasury Department in promoting the regular purchase of savings stamps and bonds in the schools.

ABOUT PEOPLE

APPOINTED . . .

Charles M. Allen, principal of University High School, University of Illinois, to associate dean of the university's college of education and coordinator of teacher education there. Dr. Allen succeeds **C. W. Sanford**, who has been named dean of admissions at the university.

George A. McConagha, superintendent at Coshocton, Ohio, to superintendent at Grandview Heights, Ohio, succeeding **W. C. Rohleder**, who is retiring.

A. G. Godley, superintendent at Powell, Tex., to superintendent of the new Kerens-Powell consolidated school district. **G. H. Wilemon**, superintendent at Kerens, is retiring.

Jack Davis, principal and assistant superintendent, Fruitridge School Dis-

trict, Sacramento, Calif., to superintendent of that district. He succeeds **Ethel I. Baker**, who is retiring after a 42 year career in education.

Floyd Manry, superintendent at Corrigan, Tex., to superintendent at Edna, Tex., succeeding **Oscar Bounds**, who has accepted the position of business manager for the public schools at Corsicana, Tex.

Harold Hill, district superintendent at St. Helena, Calif., to assistant superintendent, Mount Diablo Unified School District, Concord, Calif.

Carl Cochran, principal at Point Enterprise, Tex., to superintendent at Prairie Hill, Tex., succeeding **J. B. Trussell**, who has accepted a similar position at Mount Calm, Tex.

Alvin Zachrich, superintendent at Harbor Springs, Mich., to assistant superintendent in charge of business administration in the Lakeview district school system, Battle Creek, Mich.

William G. Alberts, supervisor of curriculum at Sullivan, Ill., to superintendent there, succeeding **Virgil Bingman**.

Oscar H. Edinger, assistant superintendent for Mount San Antonio Junior College District, Pomona, Calif., to superintendent there.

Harold Delavan, curriculum supervisor at Mountain View, Calif., to assistant superintendent there.

Jess W. Martin, superintendent at Nowata, Okla., to superintendent at Sulphur, Okla. **Willie Smith**, superintendent at Billings, Okla., succeeds Mr. Martin.

Warren M. Davis, principal at North Plainfield, N.J., to superintendent of the Union County regional district in Springfield, N.J., succeeding **Warren M. Halsey**.

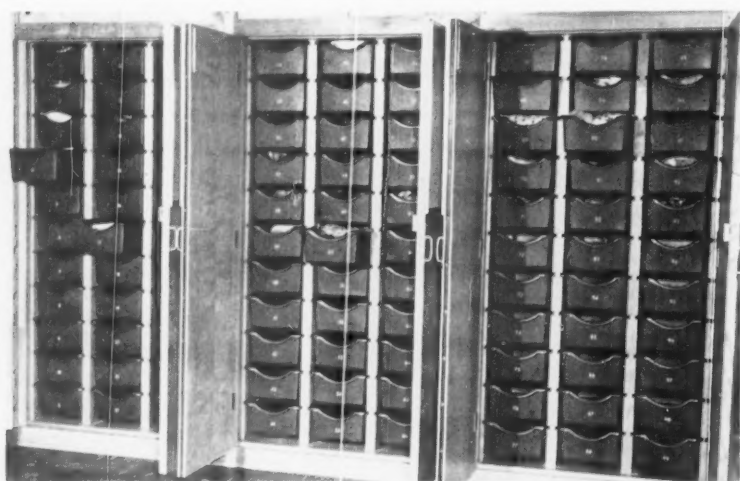
Walter Eagan, superintendent of the Windsor Union Elementary District at Windsor, Calif., to assistant superintendent and director of administrative services for Sonoma County, Santa Rosa, Calif.

Robert Schneider, principal at Attica, Ohio, to superintendent there, succeeding **Glenn Dennis**.

A. B. MacDonald, superintendent at Wallace, Idaho, to superintendent at Moscow, Idaho, succeeding **L. C. Robinson**.

Robert W. Crabbs, business manager of city schools, Steubenville, Ohio, to superintendent of the Whitehall district, Columbus, Ohio.

H. Ray Wagner, teacher at Caledonia, Ohio, to superintendent for Crawford County, Bucyrus, Ohio.



HOW TO MAKE BETTER USE OF CLASSROOM LOCKER SPACE

DUO TOTE TRAYS are used in School Home Economics Rooms, Art & Science Rooms, Physic & Chemistry Labs, Workshops.

— FEATURES —

lightweight—unbreakable—durable—easy to clean—available in colors—numerals can be added for identification—(hot stamped)—eliminates costly wood shelving.

STOCK SIZES	600	21x13x5	620	20x11-7/16x4 1/2
	610	21x10x5	650	19 1/2 x 13 1/2 x 4 1/2
	645	16x11x4	630	16x12x4
	700	20x15x5		



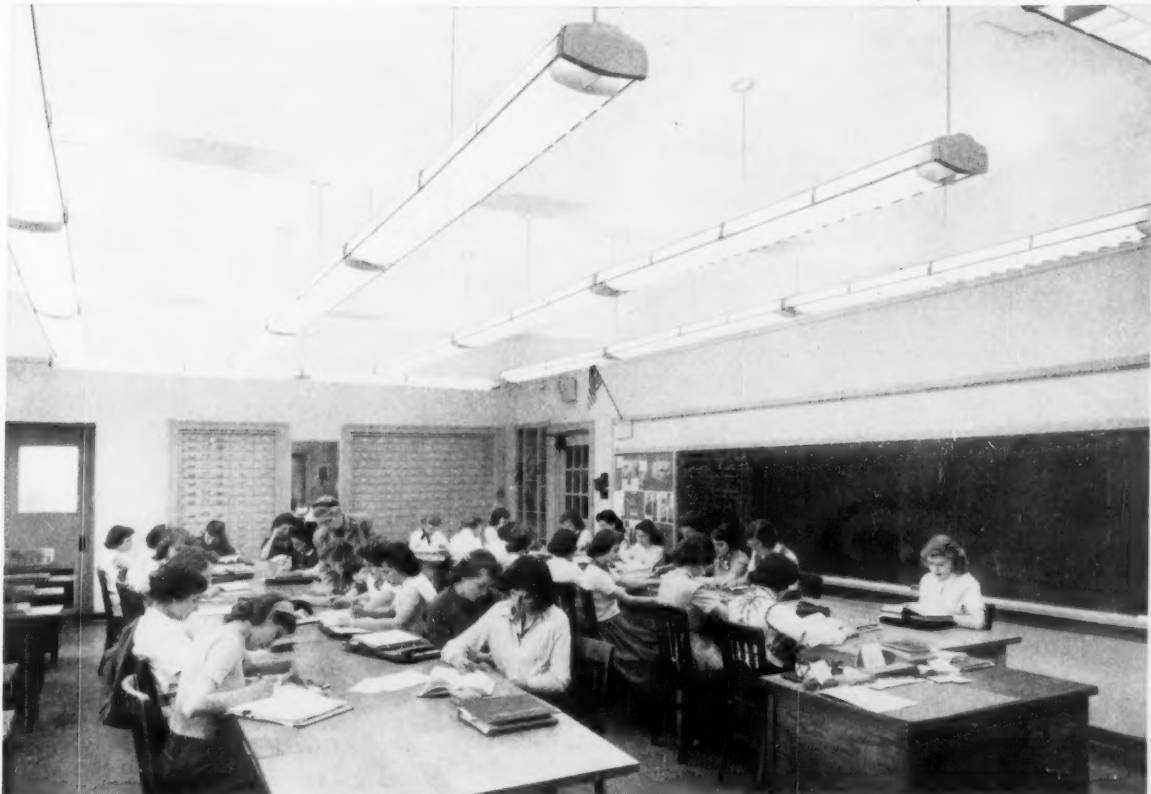
The new unbreakable **DUO TOTE TRAY** made of U.S. Royalite—tough Plastic Product.



HOLLYWOOD PLASTIC ARTS INC. Write for complete folder 515 East 9th St., Los Angeles 15, Cal. TUCKER 8192

WAKEFIELD GRENADIERS

Another
Installation



After two years: 80 footcandles on the table tops

For efficiency, economy and long life it would be difficult to improve on the Wakefield Grenadier. It is constructed so well and of such superior materials that it will last for many years. It is designed to provide ample illumination with a minimum of brightness contrasts. And it is very readily maintained.

Take this study and sewing room. Here you see Grenadiers—after two years of service—giving 75 footcandles at the chalkboard, 80 at table height in room center, 68 at drawers in rear of room. This is school lighting at its best.

We have an excellent brochure on the Grenadier, which we will be glad to send you.

THE WAKEFIELD COMPANY
VERMILION, OHIO
WAKEFIELD LIGHTING LIMITED
LONDON, ONTARIO

Community High School,
Downers Grove, Illinois

Sewing room: 38' x 21' with
11'6" ceiling height. Colors:
ceiling white; walls yellow
green; floor gray cement with
red border.

Lighting design by: Paul
Fisher, Public Service Com-
pany of Northern Illinois,
Downers Grove, Ill.



Howard E. Brown, teacher at Blue Mound, Ill., to superintendent of the Blue Mound Community Unit District there, succeeding John W. Robinson.

Leonard J. VanHoven, superintendent at Burr Oak, Mich., to superintendent at Harbor Springs, Mich.

M. J. Fields, principal at Sheldon, Tex., to superintendent there.

Harold R. Smith, teacher at Union Furnace, Ohio, to superintendent at Murray City, Ohio.

Paul Francis Shafer, head of the Valley Elementary District, Los Angeles, to associate superintendent of Los An-

geles elementary schools, succeeding Myra B. Nelson, who is retiring.

Melvin Lubbers, superintendent at Grand Rapids, Mich., to superintendent at Whitehall, Mich.

Claude W. Henkle, principal at Defiance, Ohio, to superintendent there.

Merlin Menagh, principal at Albion, Neb., to superintendent at Culbertson, Neb.

Lester H. Miller, principal at Minier, Ill., to superintendent of Community Unit District 12 at Illiopolis, Ill.

Marvin E. Smith, assistant superintendent in charge of business affairs,

Castro Valley, Calif., to superintendent there, succeeding A. B. Morris.

Leon S. Force, superintendent at Sebring, Ohio, to superintendent at New Philadelphia, Ohio.

John S. McLellan, superintendent at Outlook, Mont., to superintendent at Belt, Mont.

Roger Boline, principal at Nashville, Mich., to superintendent at Woodland, Mich. He succeeds Charles Goulding, who has been named superintendent at Yale, Mich.

Roscoe A. Davis, superintendent at Jessville, Ark., to superintendent at Fountain Lake rural schools, Hot Springs, Ark.

Paul O. Graves, superintendent at Farber, Mo., to superintendent at Bucklin, Mo., succeeding Thomas L. Keathley, who has been named superintendent at Ridgeway, Mo.

Eugene Miller, principal at Buffalo, N.D., to superintendent there.

Sam Packwood, assistant superintendent at El Centro, Calif., to superintendent there, succeeding Guy A. Weakley, who is retiring.

Oscar J. Miller, superintendent at Zumbrota, Minn., to superintendent at Morris, Minn.

Robert Palmer, superintendent at Cherryville, Mo., to superintendent of District R-VI at New London, Mo.

Dean J. Friesen, high school principal at Burwell, Neb., to superintendent at Kenesaw, Neb., succeeding Ivan Kisinger.

Walter M. Claggett, high school principal at El Paso, Ill., to superintendent of the El Paso Community Unit District.

W. P. Shepard, superintendent at Drayton, N.D., to superintendent at Cogswell, N.D.

Bill Hopkins, superintendent at Pharaoh, Okla., to superintendent at Bragg, Okla.

Harris J. Wollmann, superintendent at Revillo, S.D., to superintendent at Salem, S.D., succeeding H. W. Marten.

George R. Champlin, superintendent at Windham, Conn., to chief of the bureau of elementary and secondary education in the Connecticut State Department of Education, effective September 1.

W. J. Ritchey, assistant superintendent of White Hall Community Unit No. 2, Alton, Ill., to superintendent there. He succeeds Fred H. Shappard, who is retiring.

Kenneth C. DeGood, currently working on his doctoral dissertation at Ohio (Continued on Page 140)

Folding Tables are NOT all alike!



SMOOTH, SANITARY TOPS of Masonite Presdwood, Linoleum, Fir or Birch Plywood, Formica and Resilyte

TUBULAR STEEL FOLDING LEGS

NO other tables have as many "Extra Features" as

Mitchell FOLD-O-LEG tables

- ★ GREATER SEATING CAPACITY
- ★ MORE LEG COMFORT
- ★ UNEQUALED APPEARANCE, DURABILITY, STRENGTH
- ★ FINEST CONSTRUCTION, MATERIALS, FINISHES
- ★ BUILT FOR LONG SERVICE

The Strongest, Handiest Folding Table Made!

QUICK, EASY SET-UP ★ FOR CHANGING ROOM USES



ANY SIZE STAGE IN ANY ROOM OR HALL, ANYTIME

Mitchell PORTABLE FOLDING STANDS

- ★ Each unit a SAFE stand in itself
- ★ 4'x8'x3/4" Tops, 8" 16" 24" 32" heights
- ★ Strong, rigid TUBULAR STEEL LEGS

1, 2, 3, 4 LEVEL BANDSTANDS

"U" shaped set-up for BANDS and ORCHESTRAS allow unobstructed vision of musicians, director and audience. Improve appearance, discipline and director control. Same units set-up in a straight line can be used as stepped-up audience seating risers.

1-LEVEL PLATFORMS, STAGES

For speakers, raised speakers tables, ceremonies, acts, style shows. Quick set-up or removal. Used in Schools, Colleges, Churches, Hotels, Clubs, Lodges. Each unit only 2 1/2" thick when folded. Store in small space.

USE THE SAME UNITS FOR MANY DIFFERENT ARRANGEMENTS

Write for Descriptive Folder

MITCHELL MFG. CO.

2734 S. 34th St. • Milwaukee 46, Wis.

MFRS. of MITCHELL FOLD-O-LEG TABLES, BAND AND CHORAL STANDS, SEATING RISERS



first see **General** Floorcraft's Amazing new floor maintenance machines - then decide!

WE'RE SURE that when you've seen the truly new and revolutionary GENERAL KR Deluxe Machines, with more features than you can count . . . (another First in America's Foremost Line of Quality Floor Machines), you'll find now, as always, GENERAL FLOOR MACHINES CANNOT BE OUTDONE!

THESE OUTSTANDING QUALITIES MAKE GENERAL THE "PACE-SETTER" IN THE INDUSTRY!

- PRECISION ENGINEERING
- RUGGED CONSTRUCTION
- MAINTENANCE-FREE OPERATION
- MANY LABOR-SAVING FEATURES
- PERFECT BALANCE — LOW CENTER OF GRAVITY
- ALL CORROSION-RESISTANT POLISHED METALLIC SURFACES

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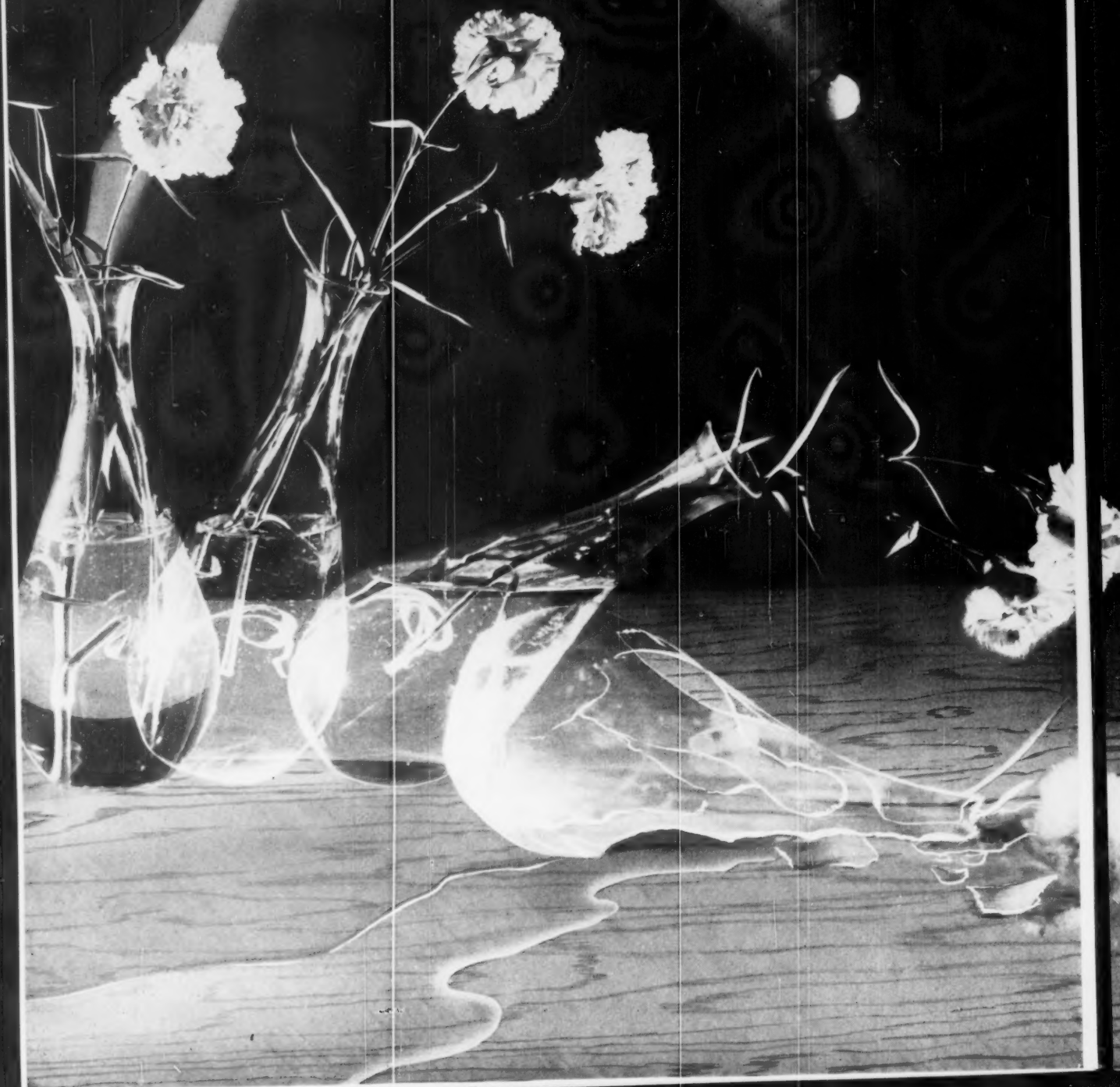
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83
15
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68

42
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84



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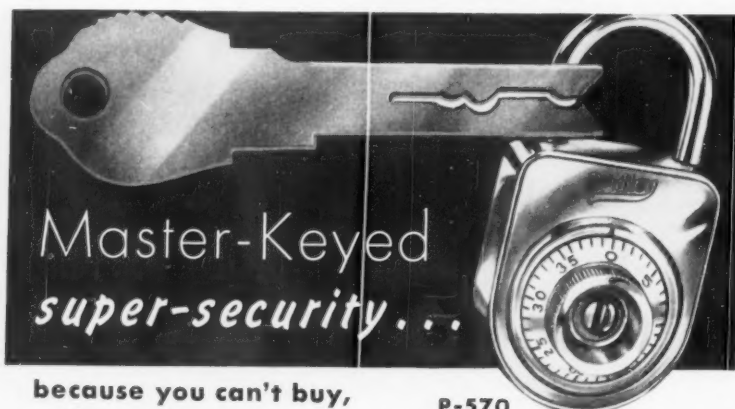
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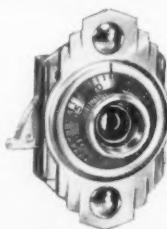
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(Continued From Page 136)

State University, to superintendent for Lucas County, Toledo, Ohio.

Norman B. Scharer, district superintendent at San Gabriel, Calif., to district superintendent at Santa Barbara, Calif.

John G. Phillips, high school principal at Portage, Ohio, to superintendent at Kalida, Ohio.

Frank O. Fenley, superintendent of Thermalito District, Oroville, Calif., to assistant superintendent in charge of curriculum at Cupertino, Calif.

Marvin L. Berge, assistant superintendent at Elgin, Ill., to superintendent at DeKalb, Ill.

S. O. Avery, high school principal at Burlington, Kan., to superintendent there, succeeding **Robert Krieger**.

James B. Cave, principal of the William Nashold School, Rockford, Ill., to superintendent of the Morris Kennedy-William Nashold School District there. Mr. Cave succeeds **Chloe Daily**, who is retiring.

Leslie G. Rood, elementary school principal, Oregon City, Ore., to superintendent of Clackamas County, Oregon City. Mr. Rood succeeds **Edwin A. Woodworth**, who is retiring.

Charles W. Sanford, associate dean of the college of education and coordinator of teacher education, to the newly created position of dean of admissions at the University of Illinois. In his new position Dr. Sanford will carry responsibility for broad services to the state in the area of secondary and higher education, as well as the responsibilities formerly assumed by the director of admissions and records, **George P. Tuttle**, who is retiring.

Raymond E. Ramsdell, assistant superintendent of the Town of Vernon Schools, Rockville, Conn., to superintendent there, succeeding **Arthur E. Chatterton**, who is retiring.

Robert Van Bremen, assistant supervising principal of the Bellmare Joint School District, Belle Vernon, Pa., to supervising principal there, succeeding **George E. Fee**, who is retiring after 34 years in that position.

W. W. Graham, superintendent at Yeager, Okla., to superintendent at Calvin, Okla., succeeding **Grady Stephens**.

Julio L. Bortolazzo, president of Stockton College, Stockton, Calif., and assistant superintendent and coordinator of secondary schools, to president of the College of San Mateo and superintendent of the San Mateo Junior College District, San Mateo, Calif. Dr.

Blue Blazes

Synthetic Cleaner now contains HCP!

BLUE BLAZES, the powerful synthetic cleaner, has been made *even more powerful* by the addition of HCP. The HCP ingredient activates BLUE BLAZES to provide *instantaneous penetrating action*.

How does it work? BLUE BLAZES, with HCP, immediately attacks dirt, oils, and any other foreign material that may be on the floor.

It penetrates grime, surrounds the particles, lifts them off the floor, and holds them in suspension until removed with a wet pickup vacuum, squeegee, or mop.

As gentle as rain water. It's completely safe, too. Though it overpowers dirt and grime in an instant, BLUE BLAZES with HCP is *chemically neutral* (pH of 7 in solution).

Non-ionic. Because it is completely non-ionic, BLUE BLAZES with HCP is able to pick up both positively and negatively charged dirt particles. Also, it leaves no film or other residue which would help create static charges which attract and hold dirt particles to the floor.

Works in hard water or soft. BLUE BLAZES with HCP works in any kind of water . . . cold or hot, hard or soft. This makes it ideal for all phases of floor maintenance.

Because BLUE BLAZES is a free rinsing cleaner, no hard water scum or soap residue is left behind to dull the beauty of your floors.

You have to see it to believe it! Ask your local MULTI-CLEAN man to demonstrate how quickly BLUE BLAZES with HCP will clean your dirtiest floor. You'll be under no obligation whatsoever.



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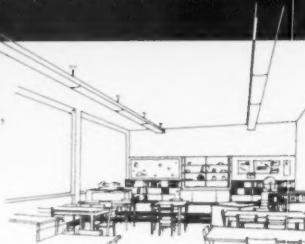
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Ask your architect or electrical contractor for full details on the Garcy Speed-line System.



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Bortolazzo succeeds **Elon E. Hildreth**, who resigned last December.

Donald Culver, superintendent of the Atlanta Rural Agricultural School, Atlanta, Mich., to superintendent of Montmorency County, Atlanta, succeeding **Ruth Westcott**, who is retiring.

Willard R. Hancock, member of the faculty of the University of Pennsylvania, to district superintendent at Yeadon, Pa. He succeeds **Ray C. Wallick**, who is retiring.

B. H. Hill, superintendent at Waseca, Minn., to superintendent at Albert Lea, Minn.

E. A. Christensen, superintendent of the Peterson Consolidated School, Peterson, Iowa, to superintendent of Schleswig Community School District, Schleswig, Iowa. He succeeds **James I. Reed**, who will become superintendent of the Lineville-Sully Community District, Lineville, Iowa.

G. C. Herring, superintendent of Hobbs Independent District, Rotan, Tex., to superintendent at Center Point, Tex. He succeeds **A. E. Coleman**.

Harold Miller, superintendent at De Soto, Iowa, to a position with the Iowa State Department of Public Instruction, division of rehabilitation.

Carroll W. Biggs, superintendent at Chatfield, Ohio, to superintendent at Woodville, Ohio.

Richard L. Kinkhead, superintendent at Terril, Iowa, to superintendent at Sutherland, Iowa.

Robert Aertker, principal of Westdale Junior High School, East Baton Rouge, La., to assistant superintendent for East Baton Rouge Parish. He succeeds **Winston Hilton**, who has been appointed to a position in the college of education at Louisiana State University.

Oswald Tufte, superintendent at Big Lake, Minn., to superintendent at Mott, N.D.

Kenneth H. Pierce, superintendent at Laurel, Iowa, to superintendent of the Baxter Community School District, Baxter, Iowa. He succeeds **E. H. Eyerly**, who has accepted a similar position at Carson, Iowa.

Howard Park Smith, principal at Harland, Ind., to superintendent for Mercer County, Celina, Ohio.

Royce Kurtz, superintendent at Delphi, Ind., to superintendent in Greencastle, Ind.

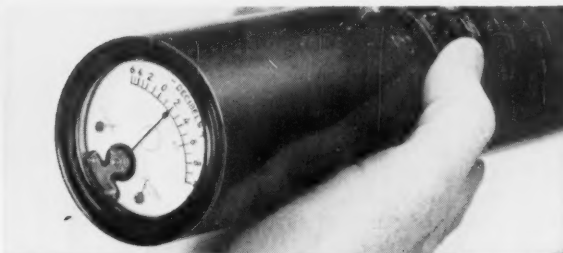
Reid Doss, teacher at Cement, Okla., to high school superintendent at Friend, Okla., succeeding **James White**.

Noah Cunningham, superintendent at Whiteface, Tex., to superintendent

Non-squeak Samsonite Chairs MAKE LESS SOUND than the turning of a page!



The sound of a page turning registered 5 decibels above the sound level of the room on the Sound Level Meter.



When this student sat on and shook the Samsonite chair, it registered only 2 decibels...didn't squeak or creak!

Proven by actual audio tests at Farmingdale school

Here is remarkable proof that when silence is needed, Samsonite chairs *stay* silent! Test-participants sat on Samsonite chairs—then went through motion after motion attempting to elicit sound. They squirmed about, turned about—crossed and uncrossed their legs. Yet the super-sensitive Sound Level Meter showed that Samsonite chairs actually *make less sound than the mere turning of a page!* No squeaking, no creaking! Samsonite and only Samsonite has given chairs the *silent treatment* with these exclusive features: Safety-guard seat hinges • Will not tilt or wobble • Replaceable rubber feet • Reinforcing steel cross



braces on chair legs • Electrically welded tubular steel construction • Remarkably strong—strong enough to stand on.



Mrs. Mildred B. Gehrke, President of The Board of Education of District 22, Farmingdale, L. I., says, "Non-squeak Samsonite chairs have been used in Farmingdale's music classes for years—where *absolute quiet is essential*. They mean less distraction, increased teaching efficiency!" Write for the new Samsonite Institutional Seating Catalogue, today!

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all-steel chairs in 10 decorator colors

Shwyder Bros., Inc., Institutional Seating Division, Dept. NS6, Detroit 29, Mich. Also makers of famous Samsonite Luggage, Classroom Furniture and Card Tables and Chairs for the Home

of the Tuloso-Midway district, near Corpus Christi, Tex.

Robert F. Kelly, assistant superintendent in charge of business affairs at Taft, Calif., to a similar position at Willowbrook, Calif.

E. V. Huffstutler, superintendent at Clarksville, Tex., to superintendent at Belton, Tex.

Gerald Franklin, superintendent at Fullerton, Neb., to superintendent at Syracuse, Kan.

Edward B. Dobranetski, principal at Warren, Ohio, to superintendent there, succeeding **J. H. Mullenix**.

Carl O. Witt, head of the special education branch at Richland, Wash., to superintendent at Warden, Wash., succeeding **Leroy Browning**.

Don B. Matthews, superintendent at Rolla, Mo., to superintendent at Lebanon, Ill.

Ervin Reed, teacher in Battle Creek, Mich., to superintendent at Marne, Mich., succeeding **Eldon Beardslee**, who has been named superintendent at Morley, Mich.

Bradford Mutchler, superintendent at Scottsville, Ky., to assistant superintendent at Bowling Green, Ky.

Norman R. Babcock, high school principal in Shawnee Consolidated District, Merriam, Kan., to superintendent of the Corinth Grade School District, Corinth, Kan., succeeding **Merle Bolton**, who resigned to accept a position with the University of Texas.

William Jakad, superintendent at Cheboygan, Mich., to associate professor at Central Michigan College, Mount Pleasant.

W. B. Ray, former high school principal at Burkesville, Ky., to superintendent at Trenton, Ky.

Odis Lewis, superintendent at Douglass, Tex., to superintendent at Zavalla, Tex.

Wilson Tilley, high school principal at Charlemont, Mass., to superintendent of Union 22 District, Charlemont, succeeding **Charles H. Minnich**, who resigned.

Leonard V. Kline, former superintendent at Ridgeway, Ohio, and presently in business in Cleveland, to superintendent at Bucyrus, Ohio.

Fred Wiegman, principal at Lake Orion, Mich., to superintendent of Lansing-Stoner Elementary School District, Lansing, Mich.

H. M. Austin, teacher at Douglas, Neb., to superintendent there, succeeding **F. W. Burke**.

Paul W. Mulford, superintendent at Montville, N.J., to superintendent at Westville, N.J.

Ellmore H. Slaybaugh, superintendent of Hamilton Township schools, Mays Landing, N.J., to superintendent at Egg Harbor City, N.J.

Earl W. Schafer, principal at Jerome, Idaho, to superintendent at Hysham, Mont.

Robert Brown, principal at Harrison, Neb., to superintendent of the high school there, succeeding **David Jesser**, who resigned.

Clifford Holth, superintendent at Hatton, N.D., to superintendent at Campbell, Minn.

Gerald E. Nelson, superintendent at Inman, Neb., to superintendent at Oxford, Neb., succeeding **A. L. Howsden**, who will work on a community project at York, Neb., under the direction of the University of Nebraska.

E. W. Eininger, superintendent at Annandale, Minn., to superintendent at Waseca, Minn.

Jacob Ewert, superintendent at St. Helena, Neb., to superintendent of District R. 1, Obert, Neb.

Norbert Kerfeld, high school principal at Littlefork, Minn., to superintendent for District 5 there.

The **Keystone Reading Readiness Service** provides interesting, essential group activities—visual, auditory, kinesthetic. A Manual for the teacher gives full information and detailed procedures for the use of each slide. The illustrations are on 100 well drawn, highly colorful slides, absorbingly interesting to small children, and shown in a daylighted room.

They meet all requirements of the usual seven Reading Readiness activities:

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Yes, you can prevent reading problems by the Right Start

Most reading difficulties are born in the first grade—and that's where they are most easily solved.

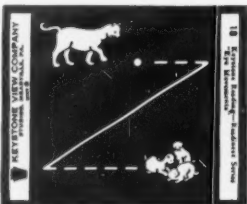
It has been found that a child's introduction to reading can be *interesting . . . stimulating . . . and highly effective* in building the foundation for Reading Skills—a prime necessity of modern education. Nothing handicaps the student more than poor reading.

Every student is entitled to a good start. Your Primary Teachers may expect the same excellent results with the Keystone Reading Readiness Service that thousands of other teachers have had.

You are invited to test these techniques for the prevention of reading difficulties, in one of your own classrooms.



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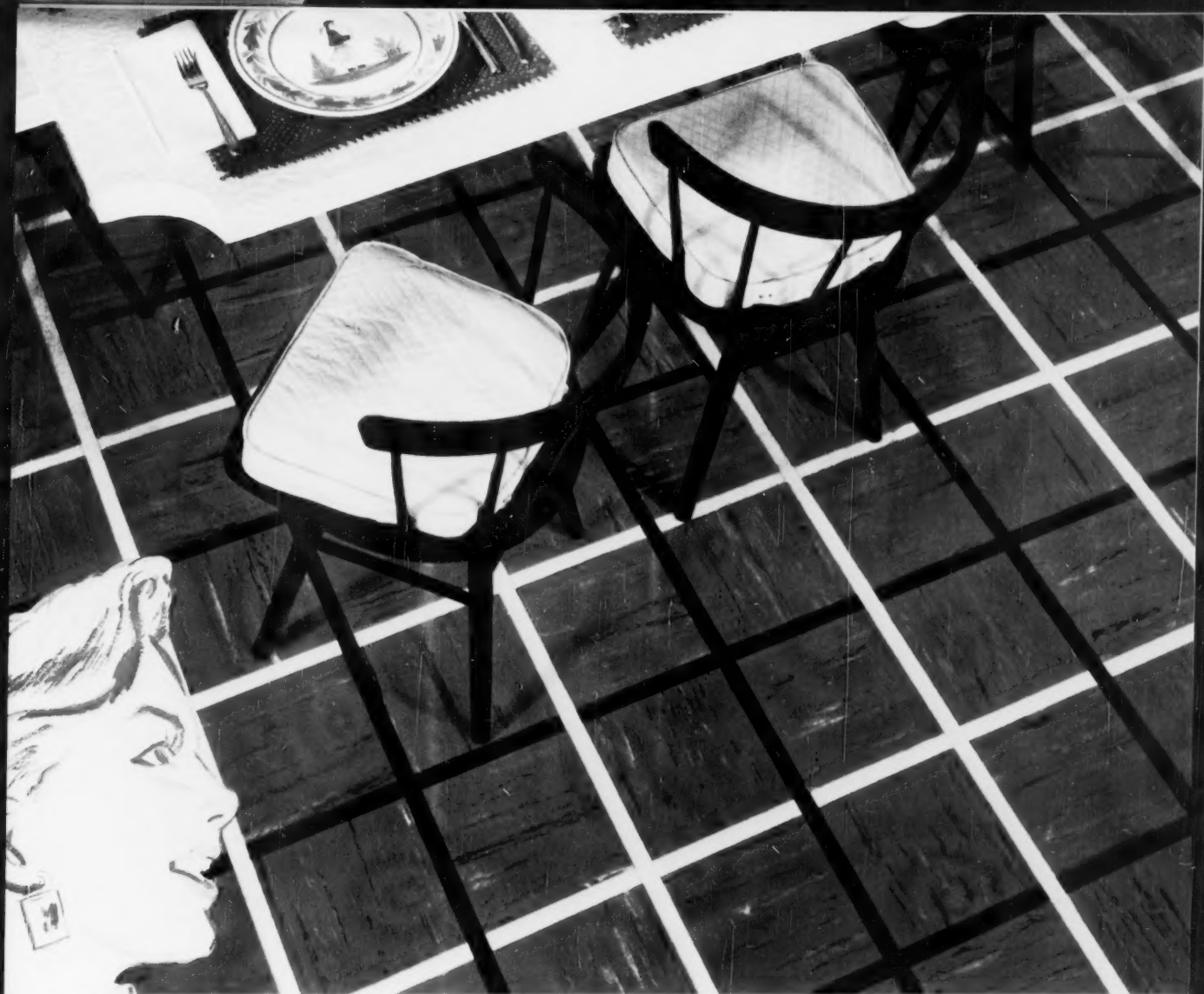
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Herbert A. Ostrander, superintendent of Hoxeyville Consolidated School, Hoxeyville, Mich., to superintendent at Kingston, Mich.

Don J. Knutzen, principal at Beaver Crossing, Neb., to superintendent there.

Cecil Radcliff, supervising principal at Franklin, Ohio, to superintendent at Crestline, Ohio.

Clifford L. Graf, principal at Morristown, N.J., to superintendent at South Brunswick, N.J.

J. L. Bartlett, principal at Deweyville, Tex., to superintendent there, succeeding C. C. Chisum.

Willis A. Baum, principal in Ford City Union School District, Ford City, Pa., to superintendent there, succeeding Paul N. Marsh.

Charles R. Tarzinski, principal at Northridge, Ohio, to superintendent there, succeeding John H. Morrison, who resigned.

Martin P. Ritzman, superintendent at Alexandria, S.D., to superintendent at Waubay, S.D., succeeding Ben F. Hins.

Ramon Reno, superintendent at Barnsdall, Okla., to superintendent at Stigler, Okla.

Richard W. Borton, former superintendent at Guide Rock, Neb., to superintendent at Spring Valley, Ohio.

George V. Hilton, superintendent at Desdemona, Tex., to superintendent at Linden, Tex.

C. Herman Grose, president of California State Teachers College, California, Pa., to deputy superintendent of public instruction, state of Pennsylvania. He will be in charge of services for handicapped children.

W. A. Lanagan, high school principal at Nacogdoches, Tex., to superintendent at Overton, Tex.

Albert T. Pyles, principal at the Indian reservation, Pine Ridge, S.D., to superintendent at the Concho Indian School, Concho, Okla.

Oliver Weber, principal at Okeene, Okla., to superintendent at Cashion, Okla.

J. H. Temby, principal at Lacrosse, Wash., to superintendent at Granger, Wash., succeeding R. H. Fergin.

Curtis N. Cochran, high school principal at Leonard, Tex., to superintendent, Ector Rural High School District, Ector, Tex., succeeding Zelmer Dona.

John J. Crabb, superintendent at Newport, Ore., to superintendent at Jacksonville, Ore., succeeding Clyde F. Sutherland, who has assumed a similar position at Sandy, Ore.

Robert W. Moyer, superintendent at Circleville, Ohio, to superintendent of Kingston Union District, Kingston, Ohio. He succeeds Eldon Wiley, who has been named superintendent at Bradford, Ohio.

Jasper R. Cockrell, former teacher at Corrigan, Tex., to superintendent there.

Clyde Strader, assistant superintendent at Weston, W.Va., to superintendent there.

F. G. Dillard, superintendent at Overton, Tex., to superintendent at Madisonville, Tex.

W. T. Hanes, superintendent at Cameron, Tex., to superintendent at Irving, Tex.

Eli R. Steed, superintendent at Barstow, Calif., to superintendent at Rivera, Calif.

Glenn Wright, superintendent at Wall, S.D., to superintendent at Highmore, S.D. Bruce Crosswaite, principal at Martin, S.D., will succeed him in the Wall superintendency.

Kenneth Munson, principal at Beeville, Tex., to superintendent at La Pryor, Tex., succeeding H. C. Brantley, who has accepted the position of superintendent at Pearsall, Tex.

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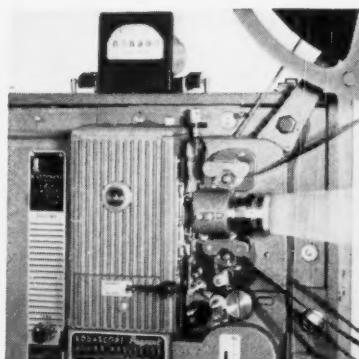
Write for catalog today
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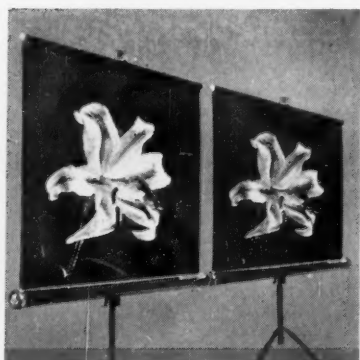
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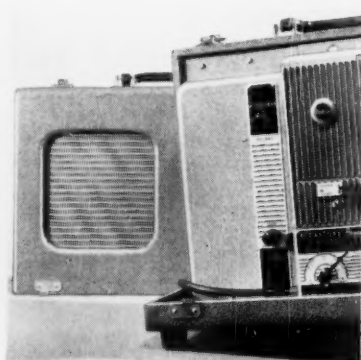
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Make your own eye and ear test

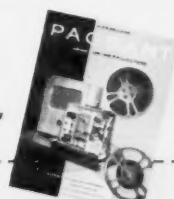
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NOW... the Kodascope Pageant Magnetic-Optical Projector (Model AV-104M)

Add *your own* sound, change it to fit changing needs. Do it easily, economically. This is really two machines in one—first it's a fine projector for showing 16mm films—silent or sound, with either optical or magnetic sound tracks. And it's a precision recording instrument, too. With it you can add sound to silent films, add personal narrations, mix music with narration, add a foreign language version to your English language sound films. You'll find *endless* uses for this new educational tool. Discover the *many* ways it can help make *ALL* your film programming more effective. Your Kodak A-V Dealer will demonstrate it. Or send for a free brochure giving full details.

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Windows of quiet beauty complement an award-winning

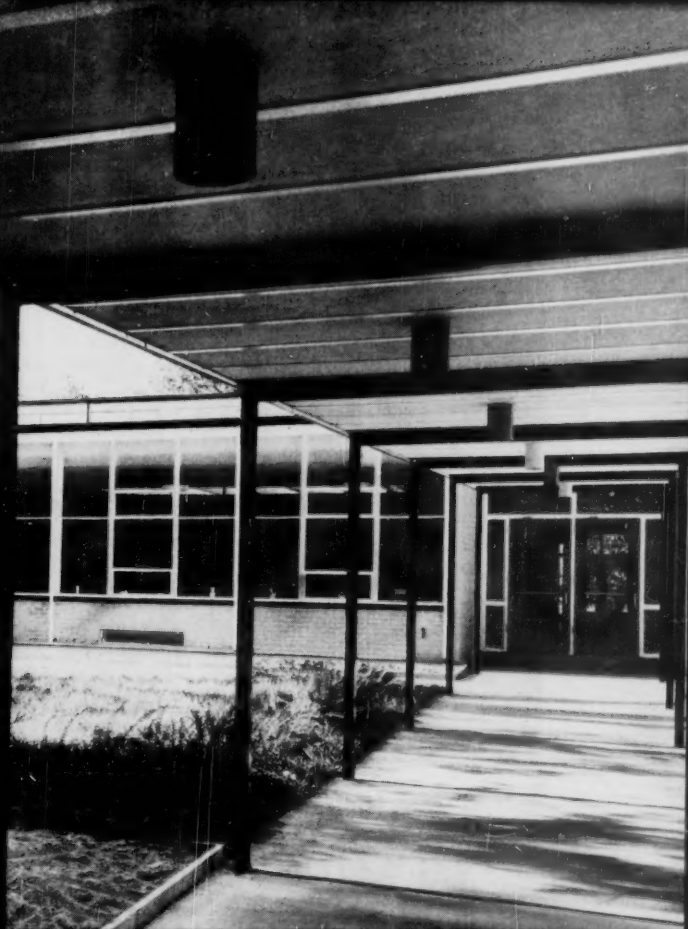
Ceco-Sterling Aluminum Projected Windows with Tubular Vertical Mullions Achieve Narrow Sight-Lines...Afford Maximum Daylighting... Reduce Maintenance Costs

It's a combination of many things—some aesthetic—some functional—that determines the winner of a top award in a national school competition. So it was with the Bristol School, Webster Groves, Missouri, which received an award of merit from the American Association of School Administrators. The aim of architects Hellmuth, Obata & Kassabaum was to create an attractive environment centered around the physical and psychological needs of young children. Much thought was given the site and building position. Good illumination came in for careful study, and here Ceco-Sterling Aluminum Projected Win-

dows were used for maximum daylighting. Ceco engineers worked closely with the architects in developing a tubular vertical mullion to achieve an extra narrow sight-line. The clean, neutral tones of aluminum windows combined pleasingly with gay colored panels in the entrance. All in all, the windows complemented the architectural concept. Since aluminum never needs painting, maintenance savings were assured. So—on your next project, consider Ceco's broad line of windows. They offer the variety and craftsmanship to meet your window requirements.

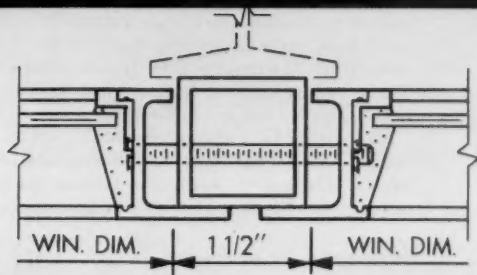


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General Offices: 5601 West 26th Street, Chicago 50, Illinois
IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE



Striking effect of narrow mullions on vertical sight-line is illustrated in this view showing the entrance canopy and primary classroom wing of Bristol School.

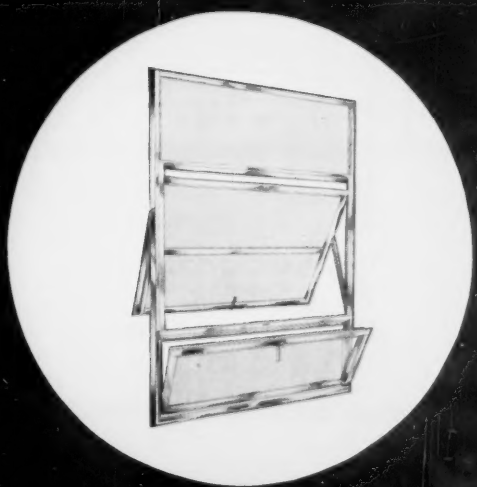
school . . .



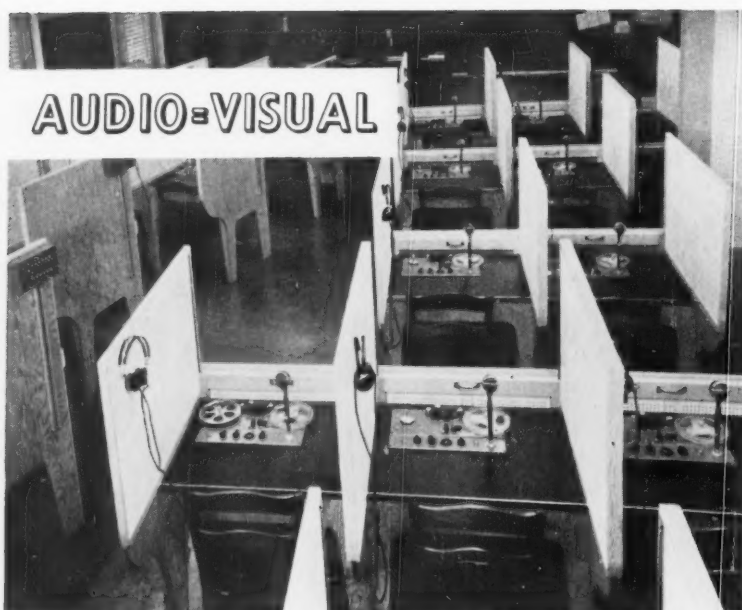
Mullions, being only 1 1/2" wide instead of the usual 2 1/2", do not compete with the sight-lines established by the building's 10-foot module design.



The neutral tone of Ceco-Sterling Aluminum Windows blends with panels of red, blue and yellow to provide a striking entrance for the Bristol School.



Ceco-Sterling Aluminum Projected Windows are especially suitable for schools. Ventilators have two-point contact, assuring tightest weatherseal. Handsome hardware is designed in keeping with modern, functional thinking.



Magnecord tape recorders in operation in a modern, well-equipped language laboratory

Your Extra Classroom Teacher... The Magnecord Tape Recorder

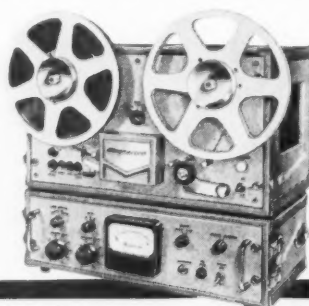
Since World War II, the magnetic tape recorder has proved to be one of the most important contributions to audio-visual education in the modern school. A particular application is in the study of foreign languages. Every student in the class gets private instruction and is called on to recite aloud every time, yet a single instructor is able to monitor and supervise the entire class. The tape recorder stimulates the student's enthusiasm in progress because he is able to hear and criticize his own responses... becomes, in fact, another teacher in the classroom.

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Engineered for perfection

Typical of Magnecord's constant research to provide American educators with the most modern and useful audio-visual tools is the new P-60-AC Professional tape recorder, which represents the highest standards of the industry at moderate cost.

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Magnecord tape recorders.

I should like to discuss with your representative
how the tape recorder can fit into my curriculum.

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School _____

Address _____

City _____

State _____

Don Hiett, superintendent at Risingsun, Ohio, to superintendent of Liberty Union Consolidated School, Delaware, Ohio.

John W. Stearns, instructor at Ferdinand, Idaho, to superintendent at Deary, Idaho.

Robert E. King Jr., principal at Upper Marlboro, Md., to assistant superintendent for St. Marys County, Leonardtown, Md.

Eldon Ready, principal at Griffith, Ind., to superintendent there.

John Schlotfeld, superintendent at Clifton, Ariz., to a similar post at Wilcox, Ariz.

Paul McPherson, principal at Bunker Hill, Ind., to superintendent of the Rockport-Ohio Township schools, Rockport, Ind.

Frederick J. Ketchum, instructor at Sterling College, Sterling, Kan., to superintendent at Sugar City, Colo., succeeding **Elmo McKee**, who has accepted a similar position in Holly, Colo.

Leslie E. Purdy, superintendent at Lebanon, Ill., to superintendent of East Richland Community Unit District No. 1, Olney, Ill.

Anson B. Barber, superintendent at Attleboro, Mass., to superintendent at Nutley, N.J.

Walter J. Ziegler, superintendent at Avenal, Calif., to superintendent at San Gabriel, Calif.

Harold Settje, superintendent at Vebelin, S.D., to superintendent at Scotland, S.D.

William R. Pogue, principal at Macomb, Ill., to superintendent at Ashton, Ill.

Stanley Abel, principal at Osborne, Kan., to superintendent there.

Robert S. Ireland, superintendent at Auburn, Maine, to superintendent in Concord, Mass.

Gaylord Caszatt, superintendent at Hopkins, Mich., to superintendent at Fair Plain, Mich.

William W. Davis, superintendent at Krum, Tex., to superintendent at Whitesboro, Tex., effective July 1, 1957. He will succeed **Lyman Robinson**, who will resign on that date.

Harold G. Broka, teacher at Beaver-ton, Mich., to superintendent there. He succeeds **Walter G. Hampton**, now assistant superintendent at Lake Orion, Mich.

Richard G. McManus, director of education at Hudson, N.Y., to superintendent at Saddle Brook, N.J., succeeding **Roy P. Burt**, who is retiring.

E. H. Knalson, superintendent at Fertile, Minn., to superintendent of

*For easy, accurate, economical hearing tests
of students in your school...the*

NEW BELTONE AUDIOMETER



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- ★ *New light weight*
(only 11 pounds)
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The new and different Beltone Basic Audiometer is the answer to the vital problem of detecting students who may be handicapped by hearing loss. It was especially designed for this purpose and offers many new features that mean easy, accurate, economical hearing tests.

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venience. It is so light and compact that it can be carried easily from one place to another. It is so trouble-free that it eliminates most maintenance problems.

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School District No. 47, including Woodcrest, Blaine, Spring Lake Park, and part of Fridley, Minn.

William F. Brown, principal at Springfield, N.J., to assistant superintendent at Madison, N.J.

John H. Messerli, superintendent at Newhall, Iowa, to superintendent at Marion, Iowa.

N. D. Cory, superintendent at Rochester, Minn., to superintendent at Muncie, Ind.

Melvin R. McCaleb, superintendent at Illiopolis, Ill., to superintendent of adult education at Evergreen Park, Ill.

Warren T. Page, superintendent at Cambridge, Ill., to superintendent at Gibson City, Ill., succeeding **Warren McCartan**. **Albert G. Smith**, teacher at Cambridge, will succeed Mr. Page as superintendent there.

Earl S. Garland, teacher at Denison, Iowa, to superintendent at Alta Vista, Iowa.

Kelso Deer, principal at Augusta, Kan., to superintendent at Whitewater, Kan.

Albert E. Rinsch, principal at Elnora, Ind., to superintendent of the Ohio Township schools, Newburgh, Ind.

D. W. Stover, superintendent at Mineral City, Ohio, to superintendent at Radnor, Ohio, succeeding **Oliver H. Gibson**.

Ralph F. Burnight, superintendent of Excelsior Union High School District, Artesia, Calif., to superintendent of Cerritos Junior College District, Artesia.

John William Royal, teacher at Seaford, Del., to administrative assistant to the superintendent there.

M. J. Fields, principal at Sheldon, Tex., to superintendent there, succeeding **Charles Bigham**, who resigned.

Keith Walton, assistant superintendent at Los Nietos, Calif., to superintendent there.

Joseph Holt Lockey, high school supervisor and curriculum director at Nederland, Tex., to superintendent there, succeeding **Clarke A. Mathews**, who accepted a similar post at Boling, Tex.

Morgan S. Fellows, supervising principal at Tremont, Pa., to superintendent at Shenandoah, Pa.

Joe W. Cassel, superintendent at Albany, Tex., to superintendent at Lake View, Tex., succeeding **S. J. Burleson**.

Ray Forbes, superintendent at Lake Park, Iowa, to superintendent at Oakland, Iowa.

Hugh M. Wilby, assistant superintendent of Claremont Unified School District, Claremont, Calif., to superintendent there.

G. L. Rader, superintendent at Hicksville, Ohio, to superintendent at North Ridgeville, Ohio.

L. E. Hansberger, superintendent at Toluca, Ill., to superintendent at Cuba, Ill.

Gerald Hayworth, principal at New Goshen, Ind., to superintendent at Middlebury, Ind.

Richard Gahr, principal at Artesia, Calif., to superintendent there.

Allen Buchanan, superintendent at Stonington, Ill., to superintendent at Grant Park, Ill.

Harry A. Koss, superintendent at Logansport, Ind., to superintendent at Oberlin, Ohio.

E. Allen Colbert, superintendent at Scranton, Iowa, to superintendent at New Hampton, Iowa.

Clarence McCauley, principal at Kennewick, Wash., to assistant superintendent for instruction and curriculum there, succeeding **Murray Taylor**, who has resigned.

Warren F. MacQueen, principal at El Segundo, Calif., to superintendent of El Segundo Unified School District.

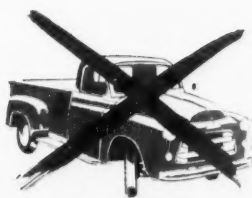
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VALUABLE *NEW* PLANNING AND EQUIPMENT GUIDE *FREE!*

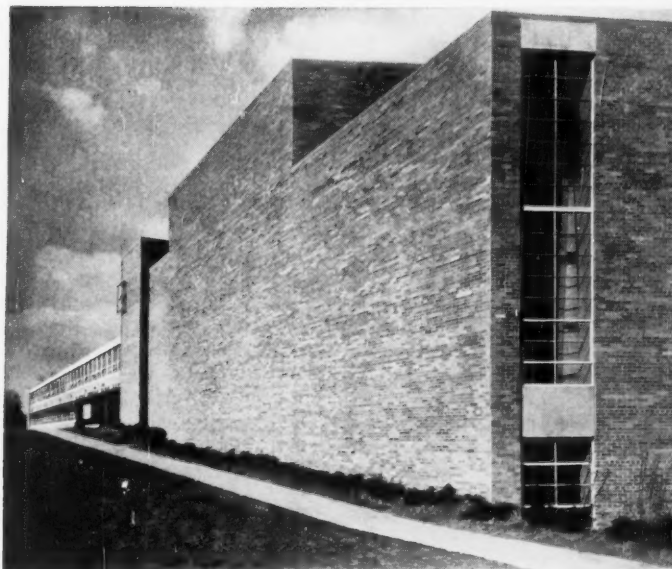
Home Economists... School Administrators... all who take part in the planning of school homemaker classrooms will want to make use of this valuable planning and equipment guide. 32 pages... filled with pictures, ideas and plans for the homemaker classroom. Prepared by a recognized leader in the field of steel kitchen and school casework manufacture. Free on request to Home Economists and School Administrators. For your free copy of "PLANNING HOMEMAKING CLASSROOMS" write on your letterhead to



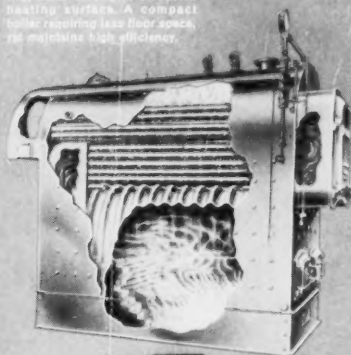
St. Charles Manufacturing Co., Dept. S-50, St. Charles, Ill.



No service calls in 2 years with "Cruising Speed" operation



Kewanee Type "C" Boiler used in Canton High School. Corrugated crown sheet is self-cleaning, adds strength, effective heating surface. A compact boiler requiring less floor space, yet maintains high efficiency.



KEWANEE

reserve plus rated

Canton High School, Canton, Illinois
Architect—Atkins, Barrow & Lasswith (now Atkins,
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Heating Contractor—Hays Plumbing & Heating Company, Urbana, Ill.

■ Canton High School votes experience the best teacher in selecting boilers...

There's an old saying that goes like this... "Experience is the best teacher." The Canton High School, Canton, Illinois, prides itself on its fine academic teaching staff. But for knowledge of boiler operation, old "Dr. Experience" gets the call. So, when it came to selecting a boiler, school executives, the architect, engineer and contractor took a page from the past and chose Kewanee Reserve Plus Rated Boilers. Yes, experience proved Kewanee "cruising speed" boiler operation gave trouble-free performance with lower fuel and maintenance costs—higher efficiency, too. In 2 years there has not been one single service call. But that's easy to

understand because "cruising speed" boiler operation guards against breakdown—there's less strain, less wear, higher efficiency, lower maintenance and fuel costs. And Kewanee reserve takes care of fluctuating demands and high power peaks, because Kewanee Boilers are rated on nominal capacity which guarantees 50% extra built-in power. Boilers rated on maximum capacity have no reserve to meet emergencies—must operate constantly at top speed—require more maintenance. So take a tip from those who have learned from experience and choose Kewanee Boilers. You'll be money ahead if you do. KEWANEE BOILER DIVISION OF AMERICAN-STANDARD, 101 Franklin St., Kewanee, Illinois.

KEWANEE  BOILERS

You can depend on Kewanee engineering

William M. Hadley, who recently completed a school survey at the University of Alabama, to superintendent at Glen Ellyn, Ill.

J. K. Corbett, teacher at Laramie, Wyo., to superintendent there, succeeding J. E. Thayer.

Clarence R. Spong, superintendent at Syracuse, Kan., to superintendent at Stafford, Kan.

Virgil Blanke, superintendent at Iberia, Ohio, to superintendent at Napoleon, Ohio.

Russell Rayburn, head of the division of special education and civil de-

fense in the Indiana Department of Public Instruction, to superintendent at Danville, Ind. He succeeds Melvin I. Sturgeon.

Max H. Mabie, principal at Zearing, Iowa, to superintendent at Beaman, Iowa.

Ethel G. Knight, teacher at White Sulphur Springs, Mont., to superintendent for Meagher County, White Sulphur Springs, succeeding Adeline Swan.

John O. Pier, teacher at Venice, Ill., to superintendent there, succeeding J. H. Gore, who has retired.

Ellis B. Hatton, coordinator of instruction at Chillicothe, Ohio, to assistant superintendent there.

W. H. Foster, superintendent at Raton, N.M., to superintendent at Farmington, N.M., succeeding LaMoine Langston.

W. R. Taylor, superintendent at Boyd, Minn., to superintendent at Anamoose, N.D., succeeding Alton Hanson, who has been named superintendent at Westhope, N.D.

Joe Nichols Jr., acting superintendent at Jefferson City, Mo., to superintendent there.

Eugene Miller, principal at Buffalo, N.D., to superintendent there.

Harland A. Schmidt, superintendent at Sandstone, Minn., to superintendent at Hector, Minn.

W. P. Shepard, superintendent at Drayton, N.D., to superintendent at Cogswell, N.D.

Ernest F. Bivins, principal at Polson, Mont., to superintendent at Troy, Mont.

Dean Fritze, principal at Hayfield, Minn., to superintendent there.

Gilbert Holle, superintendent at Almont, N.D., to superintendent at Kulm, N.D.

Everett W. Long, superintendent at Columbus, Mont., to administrator at Thompson Falls, Mont.

Thomas Workman, superintendent at Cogswell, N.D., to superintendent at Lidgerwood, N.D., succeeding J. E. Rindt, who is now superintendent at New Rockford, N.D.

Victor McCabe, superintendent at Bennington, Kan., to superintendent at Claflin, Kan.

William E. Schleder, superintendent at Heaton, N.D., to superintendent at Mercer, N.D.

Ronald C. Warder, superintendent at Gray, Iowa, to superintendent at Albion, Iowa, succeeding W. B. Macauley.

Edward C. Jones, principal at New Providence, Iowa, to superintendent at Guernsey, Iowa, succeeding C. Raymond Rutt, who has accepted a similar post at Kellogg, Iowa.

Neland Havig, superintendent at McHenry, N.D., to superintendent at Noonan, N.D.

Frank Dillard, principal at Madisonville, Tex., to superintendent there, succeeding R. V. Ford, who resigned.

John Young, superintendent at Middlebury, Ind., to staff of the division of education, Purdue University, Lafayette, Ind.

(Continued on Page 156)



In one fast operation the NEW 21" Tennant Model "E" applies dry renewal wax and buffs it to a rich luster—lets custodians maintain classroom floors, hallways, etc., up to 3 times faster than usual.

Powerful vacuum picks up dust that ordinary machines leave on floor. Self-propelling action plus light weight give excellent handling ease—you just guide it forward!

Cylinder-type accessories revolve at 1135 rpm; assure extra-fast work for all phases of resilient tile care—and for cleaning, stripping wood floors. For details write . . .

Check these TENNANT features:

- Covers 21" path—has 265 cfm vacuum.
- Has high portability; weighs only 95 lbs.
- Easy to use; has self-propelling action.
- Leaves uniform luster; no swirl marks.
- 1 hp motor—yet works off clear 110-v. line.

G. H. Tennant Co., 2526 N. 2nd St., Minneapolis 11, Minn.



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SPECIALIZED MAINTENANCE EQUIPMENT

POWER SWEEPERS • FLOOR MACHINES • SCARIFIERS • ROOF SCRAPERS • CONCRETE ROUTERS



More Modern... Safer

CHEVROLET

One follows the other, because all of the major modern features engineered into new Chevrolet school bus chassis contribute to extra dependability and safer going. Solid frame construction, brawny axles, road-leveling suspensions, well-distributed weight, high efficiency engine performance—these features mark a Chevrolet chassis ultra-modern throughout—and they're the big reasons for Chevrolet's extra safety and stamina.

Take Chevrolet's short-stroke V8's, for example, standard in new 60-pupil capacity models. Their shorter stroke means less engine wear, longer engine life—maximum performance, at lower operating costs! You can be sure that all of these models comply with National Minimum School Bus Standards. Your Chevrolet dealer has details. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Name your capacity . . . Chevrolet's got it!



10802—240-inch wheelbase,
60-pupil capacity body.



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6802—220-inch wheelbase,
48- to 54-pupil capacity body.



6702—194-inch wheelbase,
42- to 48-pupil capacity body.

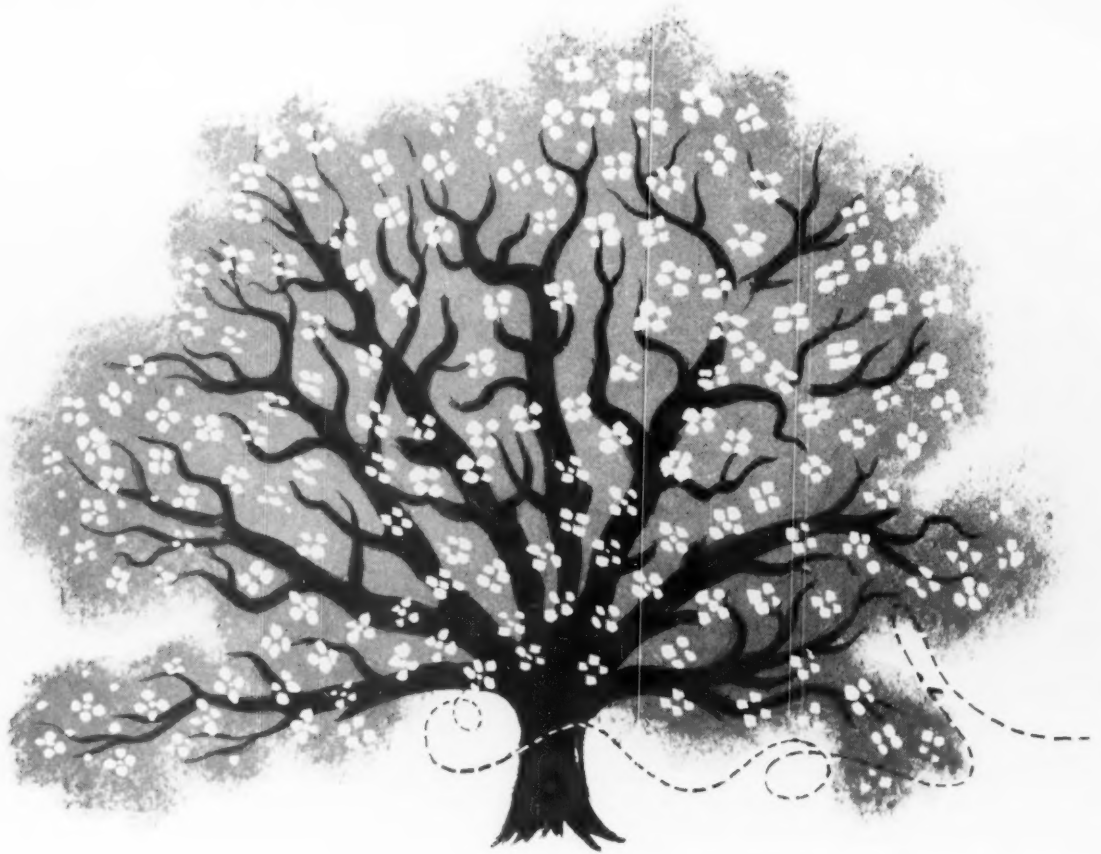


4502—154-inch wheelbase,
30- to 36-pupil capacity body.



3106 (3116)—Suburban Carry-
all, 8-pass. truck model.

New Chevrolet School Bus Chassis

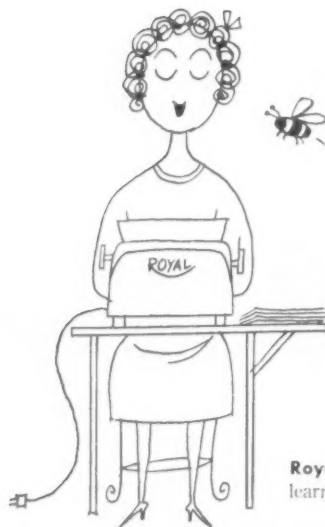


Why does a farmer need

NEARLY EVERY school boy knows that a tree bears more fruit if its flowers receive pollen from another tree of the same kind. For cross-pollenization is one of the basic facts of botany.

Let's look at a pupil and her Royal Standard Typewriter in this light.

And let's suppose that sitting nearby is another pupil who is learning on her Royal Electric Typewriter.



Royal Electric, easier to teach on . . . easier to learn on; rugged; a precision writing machine.



at least two apple trees?

An interchange between the two takes place which is analogous to cross-pollenization. Each student will want to use both typewriters. Especially since modern business uses Electrics as well as Standards, and experience on both has become a *must*.

That's why we believe you should have Royal Standards *and* Royal Electrics in your classrooms. And the time to do your ordering is *right now!*

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STANDARD • ELECTRIC • PORTABLE

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Products of Royal McBee Corporation



Royal Manual, the most popular typewriter with teachers, pupils and secretaries.

(Continued From Page 152)

Laudie Safratowich, principal at Fordville, N.D., to superintendent at Oberon, N.D.

Carl J. Tivel, superintendent at Atascadero, Calif., to superintendent of the elementary school district at Larkspur, Calif., succeeding Neil S. Cummins, who has retired.

George V. Kirk, administrative assistant to the superintendent at Seaford, Del., to superintendent at Smyrna, Del.

Walter Richter, principal at Rutland, N.D., to superintendent there.

Martin Aarthum, superintendent at Grenora, N.D., to superintendent at Washburn, N.D.

Thomas F. Lawrence, professor at Howard University, Washington, D.C., to superintendent at Willowbrook, Calif.

Francis A. Grunfelder, administrative assistant to the superintendent for Orange County, Santa Ana, Calif., to assistant superintendent there, succeeding Chester E. Gilpin, who has accepted the position of assistant secretary of the southern section of the California Teachers Association.

Charles H. Davis, superintendent at Pueblo, Colo., to superintendent in Anchorage, Alaska.

Alex R. Smith, director of curriculum and personnel at San Leandro, Calif., to assistant superintendent in charge of education and personnel there.

John Canfield, superintendent at Richards, Mo., to superintendent at Sweet Springs, Mo.

Milton Baum, principal at Silverton, Ore., to superintendent there, succeeding Howard Balderstone, who has accepted a similar post at Ashland, Ore.

William S. Davison, superintendent at Grenola, Kan., to superintendent at Moline, Kan.

Joe Marlow, teacher at Hume, Mo., to superintendent there.

Eldon J. Covell, assistant superintendent at Monterey, Calif., to superintendent there, succeeding Glen T. Goodwill, now superintendent at Santa Monica, Calif.

L. A. Mayginn, principal at Severy, Kan., to principal at Galena, Kan.

Loren A. Critser, principal at San Leandro, Calif., to superintendent at Los Gatos, Calif.

Edward E. Loveless, superintendent at Brook, Ind., to superintendent at Covington, Ind.

Louis M. Taylor, superintendent at Crocker, Mo., to superintendent at Fair Grove, Mo.

F. A. Gorton, superintendent at Washta, Iowa, to superintendent at Lanyon, Iowa.

Lewis H. Urner, superintendent at Lowry City, Mo., to superintendent, Lockwood, Mo.

Raymond O. McCullough Jr., principal at Cumberland, Md., to superintendent at Easton, Md., succeeding J. Willard Davis, who has retired.

Calvin Tennyson, principal at Amory, Miss., to superintendent at Becker, Miss.

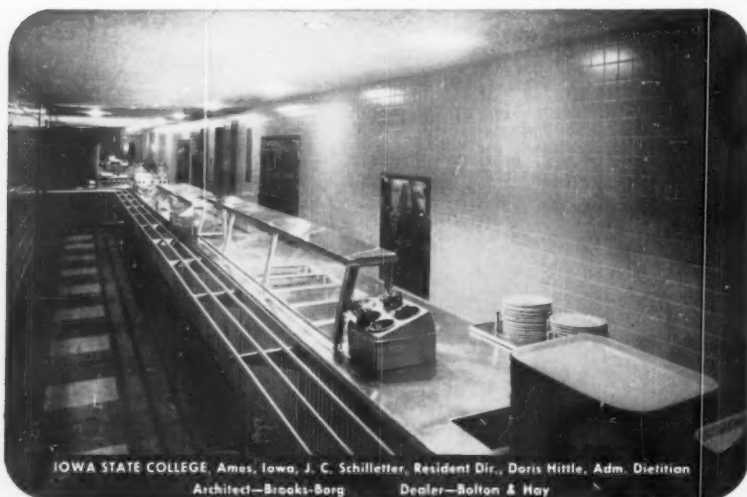
C. O. Lanman, principal at Fairview, Okla., to superintendent there.

J. Fred Essig, assistant superintendent in Youngstown, Ohio, to superintendent there, succeeding Paul C. Bunn, who is retiring.

Boyd Mitchell, principal at Leola, S.D., to superintendent at Summit, S.D.

Paul W. Mulford, supervising principal at Montville, N.J., to superintendent at Westville, N.J., succeeding Edith W. Willey, who retired.

Diamond Roach, superintendent at Concho, Okla., to superintendent at



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Food service equipment designed, engineered, fabricated and installed in any type operation, expertly fitted to available space. You can depend on thorough cooperation by your Southern Dealer, from initial analysis of your food service problems through complete installation and reliable maintenance for the years to come. Get expert help with your next kitchen equipment problem or layout—call your "Custom-Bilt by Southern" dealer, or write Southern Equipment Company, 4550 Gustine Ave., St. Louis 16, Missouri.

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"Boontonware saves our cafeteria considerable money"

says Mr. Robert K. Shafer, Superintendent of Schools, Bensalem Township



The magnificent new Bensalem High School, Cornwells Heights, Bucks County, Pa. Inset shows Mr. Robert K. Shafer at his desk.

"Our new \$2½ million Bensalem High School is completely modern and we have spared no reasonable expense to get the best equipment. That's why, when it came to furnishing our school cafeteria, we bought Boontonware. Its colors are cheery and relaxing, it handles quietly and is easy to keep spotlessly clean. But best of all, Boontonware lasts. Our cafeteria maintenance costs are low, thanks to Boontonware, and we can reflect this in the cost of our school meals."

NINE COLORS TO MIX OR MATCH

Gray	Yellow	Honeydew
Pink	Charcoal	Buff
Rose	Turquoise	Blue



Boontonware complies with CS 173-50, the heavy-duty melamine dinnerware specifications as developed by the trade and issued by U. S. Department of Commerce, and conforms with the simplified practice recommendations of the American Hospital Association.

Robert K. Shafer
Superintendent, Bensalem Township Schools

Boontonware®
MELMAC DINNERWARE AT ITS FINEST—

MANUFACTURED BY BOONTON MOLDING CO., BOONTON, NEW JERSEY

Tablequah, Okla., succeeding **Jack Brown**, who is retiring.

Edward Abrahamson, teacher at Alamosa, Colo., to superintendent at Buena Vista, Colo.

Harold E. Staten, superintendent at Okarche, Okla., to superintendent at Hinton, Okla. **Cecil Acuff**, principal at Tryon, Okla., will succeed Mr. Staten.

Kenneth Hill, superintendent at Stafford, Kan., to superintendent at Concordia, Kan., succeeding **Carl James**, who has accepted a similar position at Emporia, Kan.

Gene F. Ackerman, principal at Wyoming, Ill., to superintendent at Marengo, Ill.

Paul Akerlund, teacher at McCleary, Wash., to superintendent there, succeeding **O. C. Wood**, who resigned.

Wayne Cash, superintendent at Brunswick, Neb., to superintendent at Belgrade, Neb.

Orval L. Trail, superintendent at Melvin, Iowa, to superintendent at Zumbrota, Minn.

Glen West, superintendent at De Kalb, Mo., to superintendent at Lancaster, Mo.

Walter A. Miller Jr., superintendent at North Bergen, N.J., to superintendent at Hasbrouk Heights, N.J.

R. H. Woodruff, superintendent at Hereford, Ore., to superintendent at Lone, Ore.

M. A. Montgomery, superintendent at Andice, Tex., to principal at Llano, Tex., succeeding **C. J. Duey**, who has been named superintendent at Liberty Hill, Tex.

Charles D. Schmidt, assistant superintendent at Salem, Ore., to superintendent there.

Kenneth Wurtz, superintendent at Delmont, S.D., to superintendent at Stickney, S.D.

Ralph C. Geigle, superintendent at Oakmont, Pa., to superintendent in Reading, Pa., succeeding **Thomas H. Ford**.

Joe Carlisle, superintendent at Dundee, Ohio, to superintendent at Tuscarawas-Warwick, Ohio.

O. E. Hatcher, superintendent at Sasakwa, Okla., to superintendent at Asher, Okla., succeeding **Frank J. Harrod**. **H. T. Hopkins**, superintendent at Asher, succeeds Mr. Hatcher at Sasakwa.

Carl O. Witt, special education instructor at Richland, Wash., to superintendent at Warden, Wash., succeeding **LeRoy Browning**, who resigned.

Basil B. Nichols, superintendent of the Linda Elementary School District, Marysville, Calif., to superintendent of the Sylvan Elementary School District, Citrus Heights, Calif., succeeding **M. A. Becker**, who has retired.

J. H. Campbell, teacher at Ruthven, Iowa, to superintendent at Lawton, Iowa.

Charles Manley, assistant superintendent at Bellevue, Wash., to superintendent at Othello, Wash., succeeding **Grant Venn**.

Paul Morris, faculty member at Venus, Tex., to superintendent at Chandler, Tex., succeeding **Marshall E. Brown**.

William A. Meneely, superintendent at Anatone, Wash., to superintendent at Kennewick, Wash.

RETIRED . . .

Remi Laverigne, superintendent at Port Allen, La., for the last eight years.
B. L. Coulter, superintendent of East Forrest School at Petal, Miss., for eight years.

Roy W. Brown, superintendent at Bergenfield, N.J., for 37 years.

Earle W. Anibal, superintendent at Mountain Lakes, N.J., for 24 years.

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Los Angeles, California	San Francisco, California
Berkeley, California	Tucson, Arizona
Boston, Massachusetts	Peoria, Illinois
Eau Claire, Wisconsin	Pinellas County, Florida
Hillsborough County, Fla.	Richmond, California
Kansas City, Missouri	San Mateo, California
Moline, Illinois	Vallejo, California
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writes . . .

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James Forner, assistant superintendent at Walled Lake, Mich., for 11 years.

E. V. Dawson, former superintendent of public instruction at Muskogee, Okla.

Clinton A. Mathewson, superintendent of Canon-McMillan Joint System, Canonsburg, Pa.

James Spencer, superintendent at Whitmore Lake, Mich.

William J. Greenlee, superintendent at St. Clairsville, Ohio.

Prentiss Brown, high school district superintendent at Los Gatos, Calif., after 25 years.

Thomas F. Power, superintendent in Worcester, Mass., for 13 years.

F. L. Pickard, superintendent at Birmingham, Iowa, for 10 years.

Glenn West, superintendent at Celina, Ohio, for seven years.

Ralph O. Salmon, Burbank School District superintendent, San Jose, Calif., for 28 years.

Paul A. Young, superintendent at Elmhurst, Ill., for six years, effective July 1, 1957.

F. Roy Phillips, superintendent at Alma, Mich., after 30 years as head of the system.

B. McDaniel, superintendent at Denison, Tex., for 24 years.

RESIGNED . . .

George H. Bell, superintendent of Mount San Antonio Junior College District, Pomona, Calif., for 10 years.

Dale C. Fausey, superintendent at Hudson, Mich., for the last five years.

Samuel Gilliland, superintendent at Wagner, S.D.

Robert C. Landis, superintendent at Conshohocken, Pa., since 1926.

E. D. Dickson, superintendent at Kendrick, Okla., for five years.

Edwin R. Hillstead, superintendent at Dover, Minn., for four years.

Eugene McClintock, superintendent at Cuba, Ill., for three years.

W. W. Lee, superintendent at Clafin, Kan.

John L. Beard, superintendent at Irving, Tex.

Marion C. Hayes, superintendent for DeKalb County, Sycamore, Ill.

Donald Bone, superintendent at La Veta, Colo., for the last two years.

Elbert W. Ward, superintendent of Alameda school district, Downey, Calif., for 33 years.

Wayne Ball, superintendent at Novinger, Mo.

L. A. Holmes, superintendent at Belton, Tex.

Ethel Keenan, superintendent of Bassett school district, Puente, Calif., for 24 years.

Herbert Chiara, superintendent for Churchill County, Fallon, Nev.

Marvin A. Roseburgh, superintendent at Stockton, Mo.

Ada S. Nelson, superintendent at Los Nietos, Calif., for 44 years.

Loren R. Nicol, superintendent at Le Roy, Ill., for five years.

DIED . . .

John Callahan, 90, Wisconsin state superintendent of public instruction from 1921 to 1949. Mr. Callahan was best known for his work to consolidate small schools in Wisconsin into larger units.

Cecil A. Ward, 43, superintendent at Fairview, Okla.

Glen Long, 45, superintendent at Attica, Iowa.

Leonard A. Steger, 52, superintendent at Webster Groves, Mo., for the last 12 years.

Glenn A. Duncan, 59, Nevada superintendent of public instruction since 1950.

Harold Storey Bates, 59, superintendent at Norwood, Ohio, for 20 years.



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(discusses six basic con-
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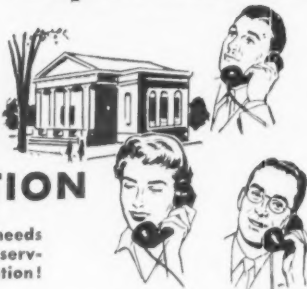
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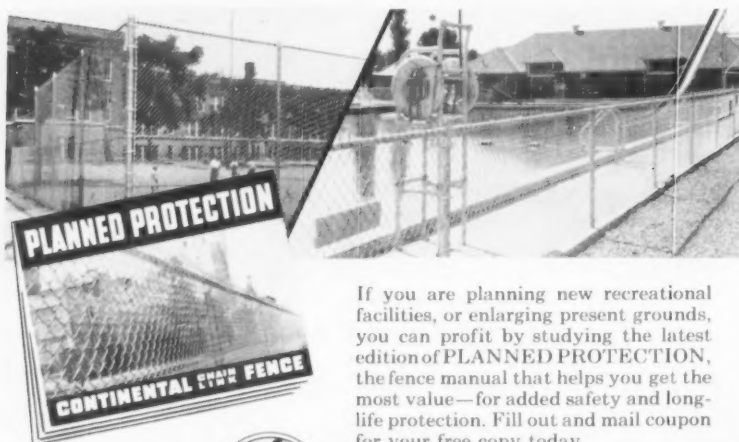
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COMING EVENTS

OCTOBER

2-5. National Council on Schoolhouse Construction, annual meeting, Washington, D.C.

7-11. Association of School Business Officials of the United States and Canada, 42d annual convention, Washington, D.C.

14-17. County and Rural Area Superintendents, N.E.A., 11th national conference, Atlanta, Ga.

17-19. Schoolmen's Week, University of Pennsylvania, Philadelphia.

20-26. National Safety Congress, 44th annual session, Chicago.

22-25. American School Food Service Association, 10th annual convention, Chicago.

NOVEMBER

1-2. 21st Educational Conference, Educational Records Bureau and the American Council on Education, co-sponsors, New York.

10-12. Adult Education Association, sixth annual conference, Atlantic City, N.J.

11-15. American Association of Land-Grant Colleges and State Universities, Washington, D.C.

11-17. American Education Week.

12-16. American Public Health Association, 84th annual meeting, Atlantic City, N.J.

18-20. Northwest Regional Conference on Administrative Leadership Serving Community Schools, jointly sponsored by N.E.A.'s Department of Rural Education and the American Association of School Administrators, Spokane, Wash.

DECEMBER

5-7. National Conference on Exchange of Persons, sponsored by Institute of International Education, Chicago.

FEBRUARY

13-20. American Association of School Administrators, Atlantic City, N.J.

16-20. National School Public Relations Association, N.E.A., midwinter meeting, Atlantic City, N.J.

20-22. American Association of Colleges for Teacher Education, N.E.A., annual convention, Chicago.

23-27. National Association of Secondary-School Principals, N.E.A., 41st annual convention, Washington, D.C.

MARCH

1-5. Department of Audio-Visual Instruction, N.E.A., national convention, Washington, D.C.

4-6. Association for Higher Education, N.E.A., 12th annual national conference, Chicago.

17-21. Association for Supervision and Curriculum Development, N.E.A., 12th annual conference, St. Louis.

24-29. Department of Elementary School Principals, N.E.A., annual meeting, Cincinnati.

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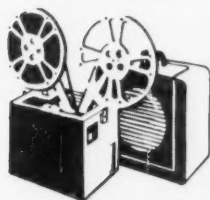
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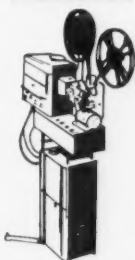
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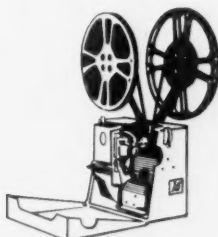
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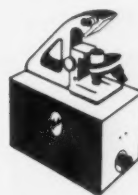
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ADMINISTRATION

A Guide for New Hampshire School Superintendents. By the New Hampshire State Department of Education and New Hampshire Association of School Superintendents. David Appleton, superintendent of schools, Conway, N.H. Pp. 99. \$2.

Current Expenditures per Pupil in Public School Systems: Large Cities, 1954-55. By Lester B. Herlihy, specialist in educational statistics, U.S. Office of Education. U.S. Govt. Prtg. Off., Washington 25, D.C. Pp. 33. 30 cents.

Current Expenditures per Pupil in Public School Systems: Small and Medium-Sized Cities, 1954-55. By Lester B. Herlihy, specialist in educational statistics, U.S. Office of Education. U.S. Govt. Prtg. Off., Washington 25, D.C. Pp. 34. 30 cents.

Your School and Staffing. Modern practices and concepts of staffing schools. Cooperative Development of Public School Administration. State Education Department, Albany 1, N.Y. Pp. 36.

HUMOR

Essays in Educology. By Lowry W. Harding, professor of education, Ohio State University. Wm. C. Brown Co., Dubuque, Iowa. Pp. 186. \$2.50.

HISTORY OF EDUCATION

A History of American Education. By H. G. Good, Ohio State University. Macmillan Co., 60 5th Ave., New York. Pp. 570. \$6.

IN OTHER COUNTRIES

Experiences of a Fulbright Teacher. By Effie Kaye Adams, coordinator of elementary education, Long View, Tex. Christopher Publishing House, Boston 20. Pp. 215. \$3.75.

Community Development Programs in India, Iran, Egypt, & Gold Coast (With Special Emphasis on Training of Personnel). By William C. Gibson, associate professor of public health engineering, University of Michigan; Hugh B. Masters, director, Georgia Center for Continuing Education, University of Georgia, and Ernest F. Witte, executive director, Council on Social Work Education, New York. International Cooperation Administration, Washington, D.C. Pp. 101.

Education in Japan. Graphic presentation. Revised edition. Research section, Research Bureau, Ministry of Education, Government of Japan. Tokyo Kyoiku Kenkyusho Publishing Department, 50, 1-chome, Shinjuku-ku, Tokyo. Pp. 108. \$2.

LIBRARIES

The State and Publicly Supported Libraries. Structure and Control at the State Level. By Fred F. Beach, chief, state school administration; Ralph M. Dunbar, chief, service to libraries, and Robert F. Will, research assistant, state school administration, U.S. Office of Education. U.S. Govt. Prtg. Off., Washington 25, D.C. Pp. 85. 55 cents.

PSYCHOLOGY

Child Development and Personality. By Paul Henry Mussen, Ohio State University, and John Janeway Conger, University of Colorado Medical School. Harper & Bros., 49 E. 33d St., New York. Pp. 569. \$6.

Forecasting Juvenile Delinquency. By William C. Kvaraceus, school of education, Boston University. World Book Co., 313 Park Hill Ave., Yonkers, N.Y. Pp. 43. 75 cents.

(Continued on Page 166)



IDEAL WORKING CONDITIONS

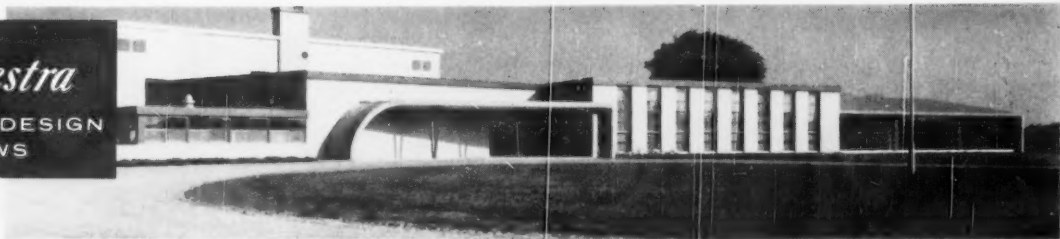
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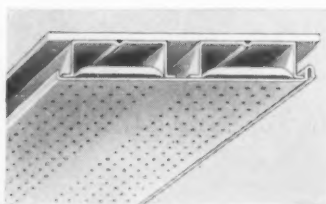
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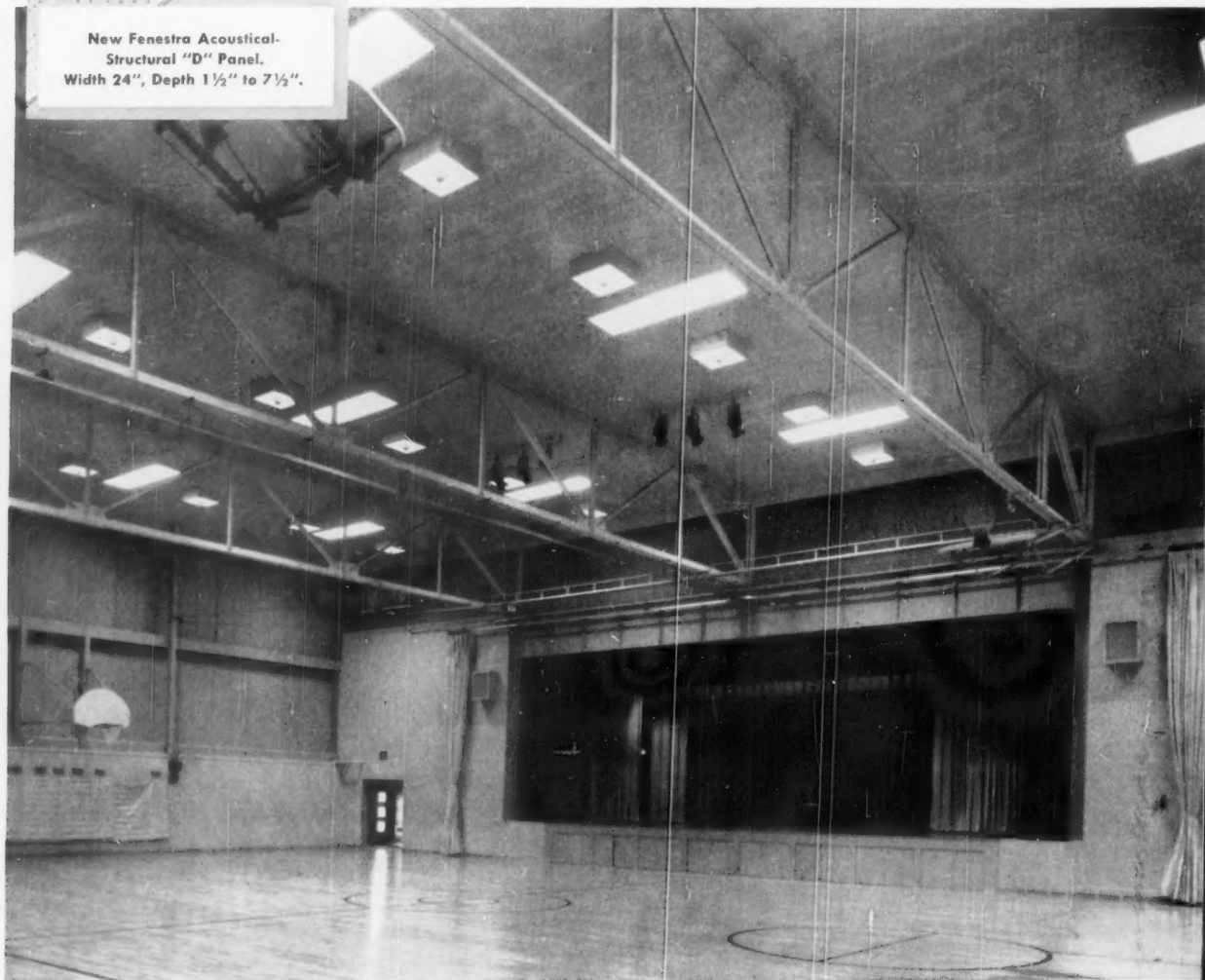
Seymour High School, Seymour, Wisconsin, cost only slightly over \$10.00 per square foot to build. The entrance is oriented to protect it from prevailing storms, and the large canopy allows unloading several school buses at one time without exposing the students to winter weather. This school contains over 55,000 square feet, including all the classrooms and specialized teaching facilities required by a modern high school.

Architect: Lawrence Monberg & Associates, Kenosha, Wisconsin. **Contractor:** Peter Rasmussen & Son, Oshkosh, Wisconsin.



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Width 24", Depth 1 1/2" to 7 1/2".

Fenestra Acoustical-Structural Building Panels form the roof for this combination gymnasium and auditorium at Seymour High School. Efficient acoustical treatment inside the panels cannot be harmed by objects striking the ceiling. This room was designed so that spectators would not have to cross the playing floor to reach the bleachers and so that daylighting would not produce sun shafts or bright spots on the playing floor. The gymnasium entrance is located off the school lobby so that it may be easily used for evening activities. The Music Department adjoins the stage and is isolated from the classrooms to eliminate disturbance and noise.



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Seymour High School, Seymour, Wisconsin, is a good example of the fine schools now being built in many sections of the country with this unique building product. Its basic structural system consists of Fenestra Acoustical-Structural Building Panels on bearing walls.

These lightweight, high-strength steel panels form the structural roof and the finished interior ceiling with "built-in" acoustical treatment. They replace five different materials—usually requiring extra labor and cost—with one prefabricated metal building unit, erected in one operation by only one trade.

The unique cellular design of Fenestra Acoustical-Structural Building Panels makes them strong enough to span up to 31 feet under normal roof loads and provide lateral support for the bearing walls. Their width—24 inches—fits perfectly with modular design techniques. This speeds up construction and eliminates cutting and fitting of the panels and other materials on the job.

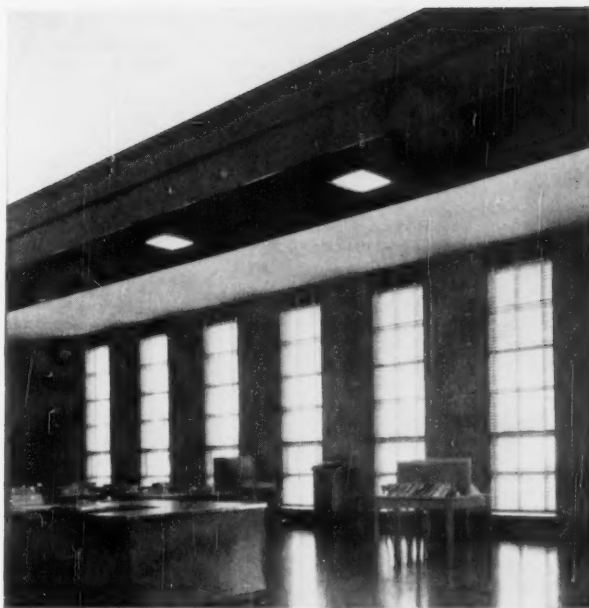
The flat bottom surface of the panels, which forms the interior ceiling, is perforated. Sound absorbing material that produces a noise-reduction coefficient of 80% is enclosed *inside the panels*. It cannot be harmed by painting or maintenance cleaning. There is no "stuck-on" material to discolor or fall off and require replacement. Because this plate is a part of the structural panels it is made of 16-gauge steel—4 times thicker than the usual metal pan ceiling construction. This assures extra resistance to damage by objects thrown against the ceiling or other impact. You save money on maintenance costs year after year!

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The library at Seymour High School, as well as the classrooms, features a Fenestra Acoustical-Structural Building Panel roof for a quiet, pleasant atmosphere and efficient sound control. This school is designed to function as a community center, too. This room opens off the building lobby and other public rooms, and the school offices are combined in this community center unit. They are easily used in the evening without opening the entire school, and visitors do not have to pass through classroom areas.

Room-to-room noise flow is prevented by sound transmission barriers incorporated into the panel design.

Interior masonry bearing walls with Fenestra Panels spanning between them save structural steel and reduce foundation and footing requirements. The exterior walls may be chiefly glass and used only as curtain walls. Schools using this basic structural system have varied in cost from \$9.00 to \$15.00 per square foot depending upon mechanical facilities, interior trim and school accessories.

All across the country, architects and school boards are discovering that they can design and build better schools at lower costs with Fenestra Acoustical-Structural Building Panels. If you are now planning a new school, you should get complete details on these unique building products and the new design concepts possible with them. Call your local Fenestra Representative, today—listed in the Yellow Pages—or mail the coupon, below.

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(Continued From Page 162)

Coming of Age: Problems of Teenagers. Public Affairs Pamphlet No. 234. By Paul H. Landis, professor of sociology at State College of Washington. Public Affairs Committee, 22 E. 38th St., New York. Pp. 27. 25 cents.

Patterns of Thinking in Solving Problems. By Guy T. Buswell, in cooperation with Bert Y. Kersh. University of California Publications in Education. Vol. 12, No. 2. University of California Press, Berkeley and Los Angeles. Pp. 115. \$2.

PERSONNEL ADMINISTRATION

The School Custodian: Important Member of Your School Team. Professional Series Bulletin No. 15. By William Vernon Hicks, department of teacher education, Michigan State University. Bureau of Research and Service, College of Education,

Michigan State University, East Lansing. Pp. 12.

RESEARCH

Yale-Fairfield Study of Elementary Teaching. A cooperative project of Yale University and the schools of Fairfield, Conn. Report for 1954-55. Edited by Clyde M. Hill, 51 Hillhouse Ave., New Haven. Pp. 321.

STATISTICS

Fundamental Statistics in Psychology and Education. Third edition. By J. P. Guilford, professor of psychology, University of Southern California. McGraw-Hill Book Co., Inc., 330 W. 42d St., New York. Pp. 565. \$6.25.

TEACHER EDUCATION

Teacher's Handbook. A guide to the interpretation and follow up of achievement test scores. By Louis P. Thorpe, professor

of education and psychology, and others. Science Research Associates, 57 W. Grand Ave., Chicago. Pp. 48. 35 cents.

SAFETY EDUCATION

Safety Education. By A. E. Florio, associate professor of safety education, and G. T. Stafford, professor of education, University of Illinois. McGraw-Hill Book Co., Inc., 330 W. 42d St., New York. Pp. 327. \$5.50.

What Everyone Should Know About High School Driver Education. Association of Casualty & Surety Companies, 60 John St., New York. Pp. 8. Free.

SECONDARY EDUCATION

The Regional Project in Secondary Education. By T. Bentley Edwards, associate professor of education, University of California at Berkeley. University of California Press. Pp. 62. \$1.

VOCATIONAL

National Vocational Guidance Association Inc. publications, 1534 O St., N.W., Washington, D.C.: **How to Visit Colleges,** pp. 19, 25 cents; **How to Create Your Career,** pp. 31, 30 cents; **N.V.G.A. Bibliography of Current Occupational Literature,** pp. 40, \$1.

The Skilled Work Force of the United States. By Eli Ginzberg, director of research of the National Manpower Council, U.S. Department of Labor. U.S. Govt. Prtg. Off., Washington 25, D.C. Free.

What Are Business and Industry Looking for in College Graduates? A report of the Detroit employer opinion survey, sponsored by the Detroit Board of Commerce and Wayne University. Prepared by Harold A. Basilius, Wayne University, Detroit. Pp. 51. Summary of the report. Pp. 15.

FROM THE DISTRICTS

The Core Program. A Study in Integration and Interaction. Proceedings of the 7th annual curriculum-guidance conference, division of curriculum development, New York City Board of Education, 110 Livingston St., Brooklyn. Pp. 29.

TEACHER EDUCATION

Effective Teaching in Secondary Schools. By William M. Alexander, professor of education and coordinator of inservice education, University of Miami, and Paul M. Halvorsen, associate professor of education, Syracuse University. Rinehart & Co., Inc., 232 Madison Ave., New York. Pp. 564. \$5.75.

Reading in Child Development. By William H. Burton, graduate school of education, Harvard University, and collaborators: Clara Belle Baker, National College of Education, Evanston, Ill., and Grace K. Kemp, Thaddeus Stevens Public School, Philadelphia. The Bobbs-Merrill Co., Inc., 730 N. Meridian St., Indianapolis. Pp. 608. School price, \$5.60.

West Virginia Educational Bulletin. Vol. 23, Nos. 5-6. Certification Issue. **Minimum Standards and Requirements for the Preparation and Certification of Public School Personnel.** State Department of Education, Charleston, W. Va. Pp. 39.

UNITED NATIONS

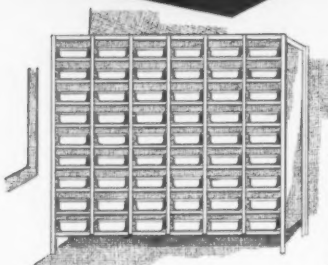
Understanding Our Neighbors in Customs, Entertainment and Folklore. 1956 edition. A youth recreation kit containing songs, dances, handicrafts and folk tales of various countries. U.S. Committee for UNICEF, United Nations, New York. Pp. 35. \$1.

Vacations Abroad. Courses, Study Tours, Work Camps. Vol. 8, 1956. UNESCO. Columbia University Press, 2960 Broadway, New York. Pp. 178. \$1.

SOLVE your classroom STORAGE problems — with the NEW school tray by— FABRI-FORM



- Made of sturdy high-impact plastic, with high gloss finish—UNBREAKABLE in normal use
- Resists soiling — easily cleaned
- Light weight and easy to handle — even by small children
- Sizes to fit all existing rack systems
- Beautiful pale tan, grey or green colors



Here's the low cost answer to your classroom storage problems—school trays by Fabri-Form that store each student's materials INDIVIDUALLY! They're widely used for storage in home economics, kindergarten, science and chemical labs, teacher's wardrobe cabinets and manual training; as well as for many miscellaneous storage uses.

You can use Fabri-Form school trays without additional equipment, yet they will fit any standard rack system you might install later. These trays solve EXISTING STORAGE PROBLEMS IMMEDIATELY, yet are adaptable for later incorporation into a more elaborate storage system.

Write for details TODAY!

The FABRI-FORM Company, BYESVILLE 1, OHIO

Greater freedom

in room arrangement



Otto Haisley School,
Ann Arbor, Michigan

Louis C. Kingscott and
Associates, Inc.
Architects and Engineers
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Shirrer Construction
Company
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Pontiac, Michigan

William Bortolotti
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Mason Contractors
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The combination of light-directing glass block and vision strip keeps brightness at comfortable levels, provides vision and ventilation.




Acting as a daylighting team the Toplite Panels and glass block provide sufficient daylight during normal days without need for artificial lighting.

Toplite Roof Panels supplement light from sidewalls in deep rooms or completely daylight windowless rooms

Now, near the windows, and far from them, good daylight can be everywhere. No longer is it necessary to confine close detail work to the area nearest the windows. Toplite Roof Panels permit daylighting of all building areas regardless of location or distance from exterior walls.

The prismatic glass units in O-I Toplite Panels "think" before they transmit the sun's rays. Needed North light and the soft low rays from the South are readily accepted. But rays from the high summer sun are rejected. Glare and heat of old-fashioned skylights are eliminated.

The complete story of this great new advance in efficient utilization of free daylight is available in a new booklet on Toplite Roof Panels. For your free copy, write today: Kimble Glass Company, subsidiary of Owens-Illinois, Dept. NS-9, Toledo 1, Ohio.

GLASS BLOCK AND TOPLITE ROOF PANELS
TWO  PRODUCTS

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO



Excellent use is made here of Truscon Intermediate Projected Steel Windows. Fontenelle Elementary School, Omaha, Nebraska; Wallace & Burrill, Inc., Architects; Parsons Construction Company, Contractors.



Floors in the Dutch Broadway High School, Elmhurst, N. Y., are made lightweight and fire-resistant with Truscon "O-T"® Open Truss Steel Joists. Here are strength and safety at low cost per square foot. Do you know about Truscon's new Clerespan® Steel Joist, 96 feet long? Send coupon for details.



These Republic Standard Single-Tier Lockers serve students in the Abraham Lincoln High School in Philadelphia, Pa. Fabricated at Republic's Berger Division, they're part of a big line of steel lockers for every school or factory requirement. Mail coupon for complete data.

REPUBLIC



World's Widest Range of Standard Steels

TRUSCON STEEL WINDOWS

Daylight Omaha's New Fontenelle School

Classrooms today are brighter, lighter, and more cheerful thanks to the increased use of windows in school construction. Outside walls, once with limited glass area, are now fabricated almost entirely from windows with the *strength of steel*. The result is better over-all illumination—and vastly improved ventilation.

A splendid example of this new trend in school design is Omaha's beautiful Fontenelle Elementary School, in which two important Truscon Steel Window types were used.

The classrooms, for example, were well-daylighted by Truscon Intermediate Projected Windows that can be custom-built to exact specifications. Specially rolled solid steel sections of original design provide advantageous weathering and attractive appearance. Upper lights can be glazed with one of several types of light-diffusing, glare-reducing or heat-absorbing glass.

Fontenelle's beautiful new gymnasium is equipped with Truscon Donovan Awning Windows that offer superb lighting and ventilation without drafts. Ventilators which operate in unison, either by mechanical control or completely concealed operators, permit ventilation in inclement weather.

These are but two of the many types of Truscon® Steel Windows currently being specified for school construction. Others are: Double-Hung Steel Windows; Intermediate Combination Windows; Maxim-Air® Steel Windows; Truair® Windows; Architectural Projected Windows. Ask your Truscon representative or send coupon below for details and specifications. Also in Sweet's File.



These handsome Donovan Awning Windows are perfect for gymnasiums. Teacher at Fontenelle Grade School in Omaha is shown regulating them for proper ventilation.

STEEL

and Steel Products

REPUBLIC STEEL CORPORATION

Dept. C-1378

3184 East 45th Street

Cleveland 27, Ohio

Please send me additional information on the Republic Steel Building Products indicated:

☐ Intermediate Projected Windows

☐ Steel Joists

☐ Donovan Windows

☐ Lockers

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____



Dependable Locker Guardians

NATIONAL LOCK Combination Locks



check these
**QUALITY
FEATURES**

SHACKLE LOCKS

- Sound engineering
- Sturdy components
- Brass working parts
- Chromium plated shackle
- Stainless steel outer case
- Self-locking
- 3-number dialing
- Available with or without masterkey feature

BUILT-IN LOCKS

- Rugged construction
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- 3-number dialing
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- Fit all standard lockers
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Master charts for lock records, complete with leatherette binder, are supplied FREE with quantity lock purchases. Write on your letterhead for FREE sample lock.

**ASK ABOUT OUR LABORATORY-
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**NATIONAL LOCK
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Check this modern chair!

...and know why
Krueger's Series 100
gives you
**better performance
at lower cost!**



FOR SIZE, COMFORT AND

SERVICE THIS CHAIR MEETS ALL REQUIREMENTS

One of the most comfortable folding chairs of all—and certainly the *best value* per dollar expenditure! Strong, rigid and durable, its electrically seam-welded tubular steel frame is specially designed and constructed to provide many years of the hardest kind of usage. Unusually safe, too, there are no sharp edges, corners or exposed mechanisms to pinch the occupant or tear one's clothing — no danger of chair accidentally tipping if seated well forward or far back. Beautifully finished in Beige, Azure Grey or Saunders Green baked-on enamel. Steel or wood veneer seats. Write for new special, detailed brochure.

HEAVY GAUGE TUBULAR FRAMES

Note reinforcing at seat pivot points with 6" vertical frame strengtheners for stronger support — more rigid bearing points to secure seat pivot rod — prevent frame spreading.

LARGER, ROOMIER SEATS

Choice of contour shaped and drawn one-piece steel seat 15 1/2" wide by 16" deep or two-way contour shaped wood veneer seat with sloping forward edge for maximum comfort.

SIMPLIFIED, QUIET CLOSING

A light push downward on the backrest and chair opens—an upward lift and it closes. No other chair operates so easily, so smoothly! Folds flat to double frame thickness.



Demountable CHAIR TRUCKS

Four standard sizes hold both X-type channel or Y-type tubular chairs—upright or horizontal. Regular or under-stage models. Demountable ends and exclusive chan-angle frames permit stacking empty trucks one on other.



Write

For new, complete line catalog No. 600 as well as brochure 100.

KRUEGER
METAL PRODUCTS • GREEN BAY • WISCONSIN



Let Wyandotte servicemen improve your dishwashing!

They help you to lower your use-cost, get better results, with modern methods *and* Wyandotte Salute



Behind the headline-making tests recently conducted in Oklahoma City that proved "SALUTE lowest in use-cost," is a story that concerns men like those in our picture.

You see, these men are Wyandotte dishwashing service representatives. Their job is helping you with up-to-the-minute service for your modern dishwashing needs. Carefully checking your entire dishwashing operation, including Wyandotte precision control instruments, they insure the uniform high quality and low use-cost that make SALUTE your best buy in machine-dishwashing compounds.

Because these "men-behind-the-headlines" are always on the job, you can be sure that you'll always get effective results with SALUTE—*stain-free dishes, rapid drainage, spot-free glasses, and streak-free silver.*

Wyandotte products and service like this will help you raise your dishwashing effectiveness. It will pay you also to ask your Wyandotte jobber or representative about POREEN, the amazing rinse-booster. Call him today. Wyandotte Chemicals Corporation, Wyandotte, Michigan. Also Los Nietos, California. Offices in principal cities.

This advertisement showed the results of tests comparing SALUTE® with five well-known machine dishwashing products. SALUTE ranged all the way from 27% more clean dishes per pound of powder to 150% more production than other leading brands.



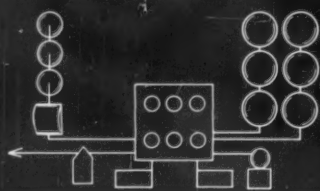
Wyandotte CHEMICALS

J. B. FORD DIVISION

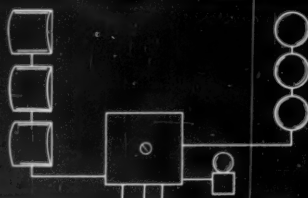
Specialists in Dishwashing Products

*Select the best protection
for your school...*

Only EDWARDS makes every Fire Alarm System*



TYPE AMVAD — *Completely automatic system combined with manual alarm stations, gives 24-hour protection. Ideal for most schools. Operates regardless of power failures. Sounds evacuation signal, indicates location of fire at a central station, may be used to signal municipal fire headquarters automatically. Fully supervised for complete safety.*



TYPE SSA — *For large buildings: coded signal tells where alarm was sounded, locating the fire while it gives the evacuation signal. Fully-supervised system sounds a special trouble bell if there is any failure in the system.*



TYPE PSSA — *Pre-signaling system sounds a coded signal at certain stations only... authorized personnel must initiate general alarm. Prevents needless evacuation, protects against the effects of false alarms.*



**... and designs and manufactures every component part!*

To be sure of your school's safety, select the fire alarm system made entirely of "matched-design" components. All parts of an Edwards system are designed and manufactured by Edwards to function perfectly together, give you absolute dependability for the life of the building.

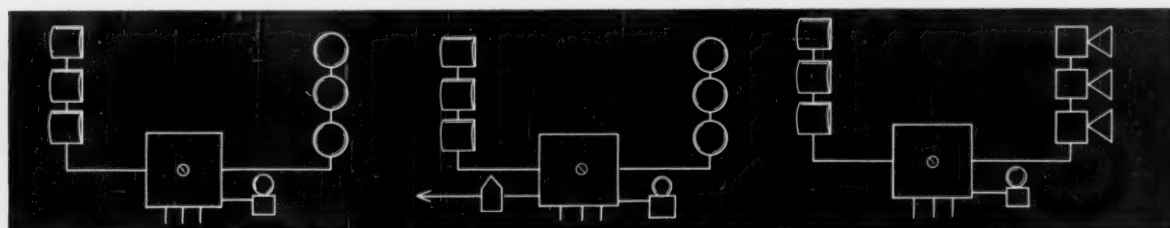
And there's an Edwards system that matches the needs of your school whatever its size or design. For Edwards makes all kinds, not one or two types alone. Edwards Technical Specialists can recommend the systems that are best without compromise or complication.

Over 80 years of designing and manufacturing signaling systems assure simplicity and dependability in every Edwards Fire Alarm, whether automatic or manual... coded or non-coded... for large schools or small. Installation is simple and inexpensive. All systems are Underwriters' listed where applicable.

For the best in fire protection, follow the lead of hundreds of schools all over America: specify Edwards. For further information, write Dept. NS-9, Edwards Company, Inc., Norwalk, Connecticut. (In Canada, Edwards of Canada, Ltd., Owen Sound Ontario.)

Specialists in Signaling Since 1872

DESIGN • DEVELOPMENT • MANUFACTURE

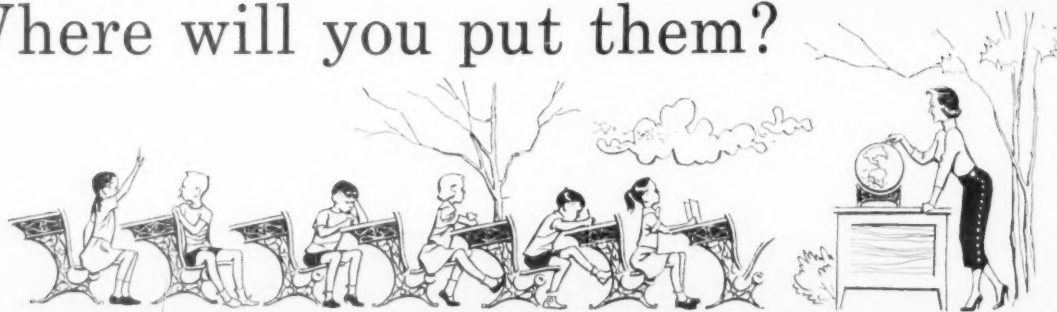


TYPE SSAMR — For smaller buildings: sounds a distinctive alarm signal which does not indicate location of fire, where buildings are small enough to make automatic location unnecessary. Full supervision with trouble bell guarantees continuous protection.

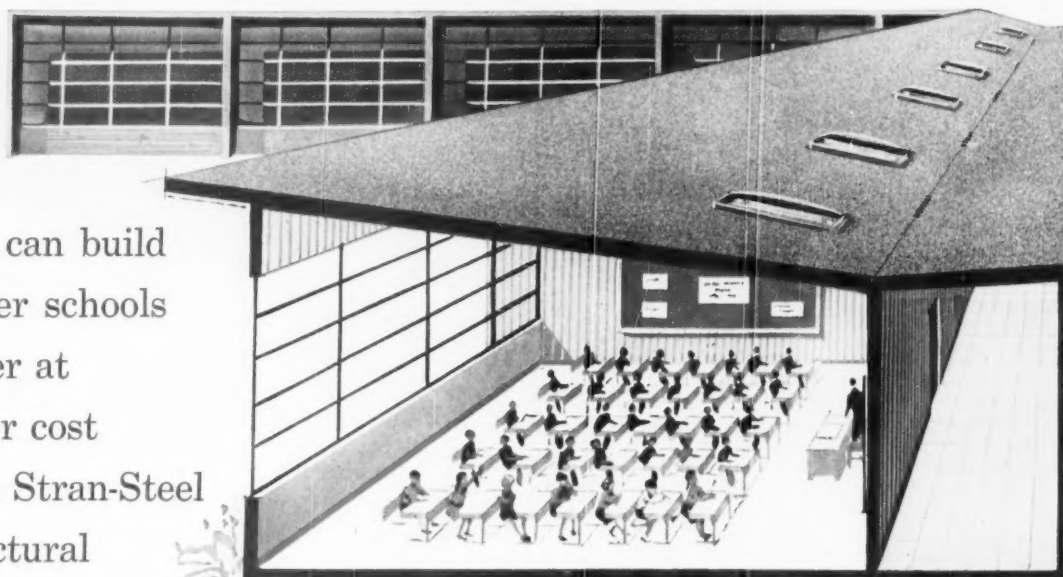
TYPE SSAM — City-connected system sounds a coded signal within the school and also at the municipal fire headquarters, entirely automatically. Recommended particularly for large schools and institutions.

TYPE CCVA — Simplest supervised system sounds an evacuation alarm without indicating location. Closed circuit, full supervision assures instant warning whenever system becomes inoperative due to open circuits, grounds or other defects.

Where will you put them?



You can build
better schools
faster at
lower cost
with Stran-Steel
structural
systems



How can Stran-Steel structural systems cut school building costs yet offer prime quality construction? One answer is fully integrated components. The Stran-Steel systems consist of framing joists and studs, channels, roof decking and new side wall panels—all engineered to fit together.

But the big cost-saver is the nailing groove. Stran-Steel's distinctive nailing groove makes it possible to nail collateral materials directly to the framing. No special tools are needed.

Adaptable to all types of construction, the system can be used for complete new schools, additions to present buildings or single classrooms. And design flexibility is unlimited. Whatever style of architecture you choose, contemporary or traditional, you get an attractive, durable, fire-safe structure with Stran-Steel.

Be sure to ask your architect how these modern Stran-Steel structural systems can be used on your next school project. They are readily available from an authorized dealer near you.

Stran-Steel Corporation
Ecorse, Detroit 29, Michigan

Please send full information on Stran-Steel structural systems for schools.

Name _____

Address _____

City _____ Zone _____ State _____

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R



STRAN-STEEL CORPORATION

Ecorse, Detroit 29, Michigan • A Unit of

NATIONAL STEEL CORPORATION

What's New FOR SCHOOLS

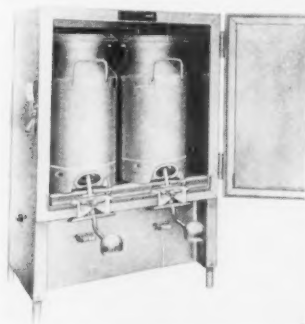
SEPTEMBER 1956

Edited by BESSIE COVERT

TO HELP YOU get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 224. Just circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. The NATION'S SCHOOLS will send your request to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Norris Milk Dispensers Completely Re-Designed

Fourteen new features have been incorporated into the new Norris Super



Manhattan Milk Dispensers, available in one, two and three can models. The new valve needs no taking apart for cleaning. It has simplified two-piece construction with positive dripproof shut-off and keeps the milk ice cold in the tube. The re-engineered refrigeration system is quieter and holds lower temperatures at top and bottom. Heavier insulation is used in the new door which is constructed for easy cleaning inside and out. A temperature gauge on the outside of the door gives inside temperature at a glance.

Other features include round corners in the cabinet and apron for ease of cleaning; a new shut-off plate on the valve which forms the assured sanitary seal; temperature control knob for instant adjustment; molded vinyl door gaskets for a perfect, tight seal; screened refrigeration compartment to prevent collection of dust and lint, and easy access to the cooling unit. The front legs are adjustable, forward or backward, to fit any counter width. The new glass-positioning guide assures quick filling without dripping or spilling. The new models are streamlined, efficient in operation and easy to maintain in sanitary condition. Norris Dispensers, Inc., 2720 Lyndale Ave. So., Minneapolis 8, Minn.

For more details circle #1 on mailing card.

Concentrated Painter Colors for Tinting Five Gallon Lots

A new tinting system known as Pittsburgh Maestro Concentrated Colorants consists of nine heavily concentrated colors and black and white designed to

speed up on-the-job tinting of all kinds of paints in five gallon lots. A wide range of tones and hues can be achieved with the tube colorants which can be used in oil, alkyd, PVA or latex emulsion bases. The concentrated colors are packaged in eight and 16 ounce tubes and only small amounts need be used for large quantity mixing. A key to quick mixing of the 300 decorator colors in the system is included. Pittsburgh Plate Glass Co., 632 Ft. Duquesne Blvd., Pittsburgh 22, Pa.

For more details circle #2 on mailing card.

Metal Chair Has Padded Back and Seat

Square metal tubing is used for the legs and frame of the Model 23-L General Chair. The backrest is Tufflex padded, contour-curved and the seat is all-steel, comfort-cushioned and saddle-shaped, both covered in a choice of two elastic-supported vinyl upholstered ma-



terial available in twelve different colors. The chair is sturdily constructed and legs have rubber-cushioned steel glides. The rear legs are extended to keep the backrest from marring walls. The metal frame is finished in bonderized baked-on enamel in Green Tint, Tan, Gray, Brown and Olive Green. Hamilton Mfg. Corp., Columbus, Ind.

For more details circle #3 on mailing card.

Sound System Console Has Dual Channel

Two separate program sources can be distributed simultaneously with intercommunication on a separate channel with the new line of RCA Dual Channel Consoles for central sound distribution systems. The self-contained, compact, floor-mounted unit has all operating con-

trols within easy reach on the functional main panel. Microphone and monitor speaker functions are combined in one unit and a separate microphone is not required. The RCA automatic three-speed record changer is mounted in a convenient drawer, intermixes 10 inch and 12 inch records of the same speed and shuts off automatically.

Programs from radio, records, tape or microphone can be distributed to any or all loudspeaker zones. The new units permit immediate transmission of announcements, news, recorded programs, emergency and time signals to any area. Programs originating in remote locations, such as the auditorium or gymnasium, may also be broadcast to all or to selected areas. When equipped with a communication amplifier, intercommunication is possible at the same time the other channels are working. An "all call" switch cuts off all programs in case of emergencies. Radio Corporation of America, Camden 2, N.J.

For more details circle #4 on mailing card.

Typewriter Desk Height Quickly Adjustable

The new No. 23511 Automatic Typewriter Desk is quickly and easily adjustable in height from 25 to 30 inches. The typing platform is raised or lowered by a non-removable turn-handle concealed beneath and to the right of the knee space. Desks can be readily changed in height by each pupil to suit his individual height for typing efficiency. When raised to the full 30 inches the platform forms a smooth flat writing



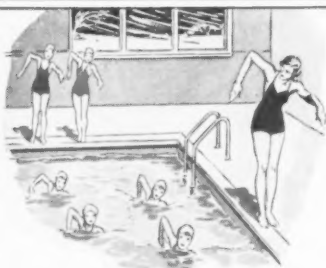
surface with the desk top. The all-wooden desk is of solid birch and maple construction. Desks of America, Inc., Bridgeport 6, Conn.

For more details circle #5 on mailing card.

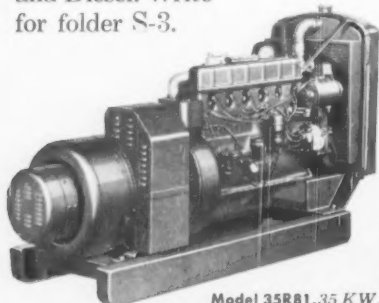
(Continued on page 176)

KOHLER ELECTRIC PLANTS

Would a
power failure
leave you
powerless?



Sudden darkness in a swimming pool may cause panic and disaster—when central station power is cut off by a storm or accident. Kohler stand-by plants *automatically* take over critical loads. Provide lighting for pools, gyms, auditoriums, corridors, exits as long as needed—also maintain heating and ventilating systems. Install *before* the emergency. Sizes, 1000 watts to 35 KW, gasoline and Diesel. Write for folder S-3.



KOHLER CO., KOHLER, WISCONSIN • EST. 1873

KOHLER OF KOHLER
PLUMBING FIXTURES • HEATING EQUIPMENT
ELECTRIC PLANTS • AIR-COOLED ENGINES
PRECISION CONTROLS

What's New ...

Two-Pupil Desk in Classmate Line

Desks or tables for the use of two pupils are a unit of the new Classmate Line of school furniture. Self-leveling,



silicone-floating glides cushion the desks and automatically adjust to uneven floors so that the desks offer a firm writing table. High-pressure-type plastic, known as Amerex and developed by the manufacturer, is used for the desk tops for permanence and a smooth writing surface. The two-pupil desks are available with or without sanitary steel book compartments in sizes from 24 by 48 inches to 36 by 72 inches. American Seating Company, Grand Rapids 2, Mich.

For more details circle #6 on mailing card.

Efficiency and Safety in White Bus Chassis

Both conventional and transit-type units are offered in the new series of White chassis engineered especially for school bus applications. They are designed for maximum efficiency and safety in transporting school children at low cost. The conventional 2000B chassis line is offered with a wide variety of chassis and unit options, employing White's "Unit Option Plan" to meet exact operating conditions and state school bus standards. This chassis is available with a range of White Mustang Engine sizes, starting with the Model 116A, 110 h.p. and running up to the Model 250A, 145 h.p. engine, and in sizes to accommodate 48, 54, 60 and 66 pupils.

Two different power sizes are offered in the 218 and 226 inch wheel base chassis for transit-type buses. The White



Mustang Engine Model 250A develops 145 h.p. and for hilly terrain where additional power is required, the Model 390A White Mustang Engine develops 200 h.p. The White Motor Co., 842 E. 79th St., Cleveland 1, Ohio.

For more details circle #7 on mailing card.

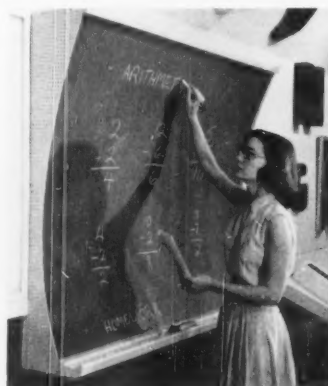
Powdered Cleaner Removes Stain and Rust

Huntington Stain-Dust Remover Powder dissolves rust, metal tarnish, ink and fruit stains and grease from a variety of hard surfaces. It need only be sprinkled on a damp cloth and lightly rubbed on stained surface to restore the original shine. The powder is available in 12 ounce shaker top cans. Huntington Laboratories, Inc., Huntington, Ind.

For more details circle #8 on mailing card.

Miracle Chalkscope Has Three-Dimensional Surface

The writing surface of the Miracle Chalkscope instead of being vertical, is concave, and so shaped as to reduce fatigue in reading and writing. The teacher need not stretch to reach the top or stoop to reach the bottom of the Chalkscope in presenting material to the class. The three-dimensional surface gives improved visibility since the line of sight to any part of the Chalkscope is



approximately equidistant from the viewer's eyes. Glare from overhead lighting is said to be reflected to the floor when the Chalkscope is used and window glare is reduced.

The Miracle Chalkscope is easily and inexpensively installed and provides a permanent writing surface of Miracle Solid Acrylic Chalkboard. It is offered in five colors: green, antique rose, blue, tan and light green. New York Standard Blackboard Co., Inc., 225 Broadway, New York 7.

For more details circle #9 on mailing card.

Duplex Outlet Is Weatherproof

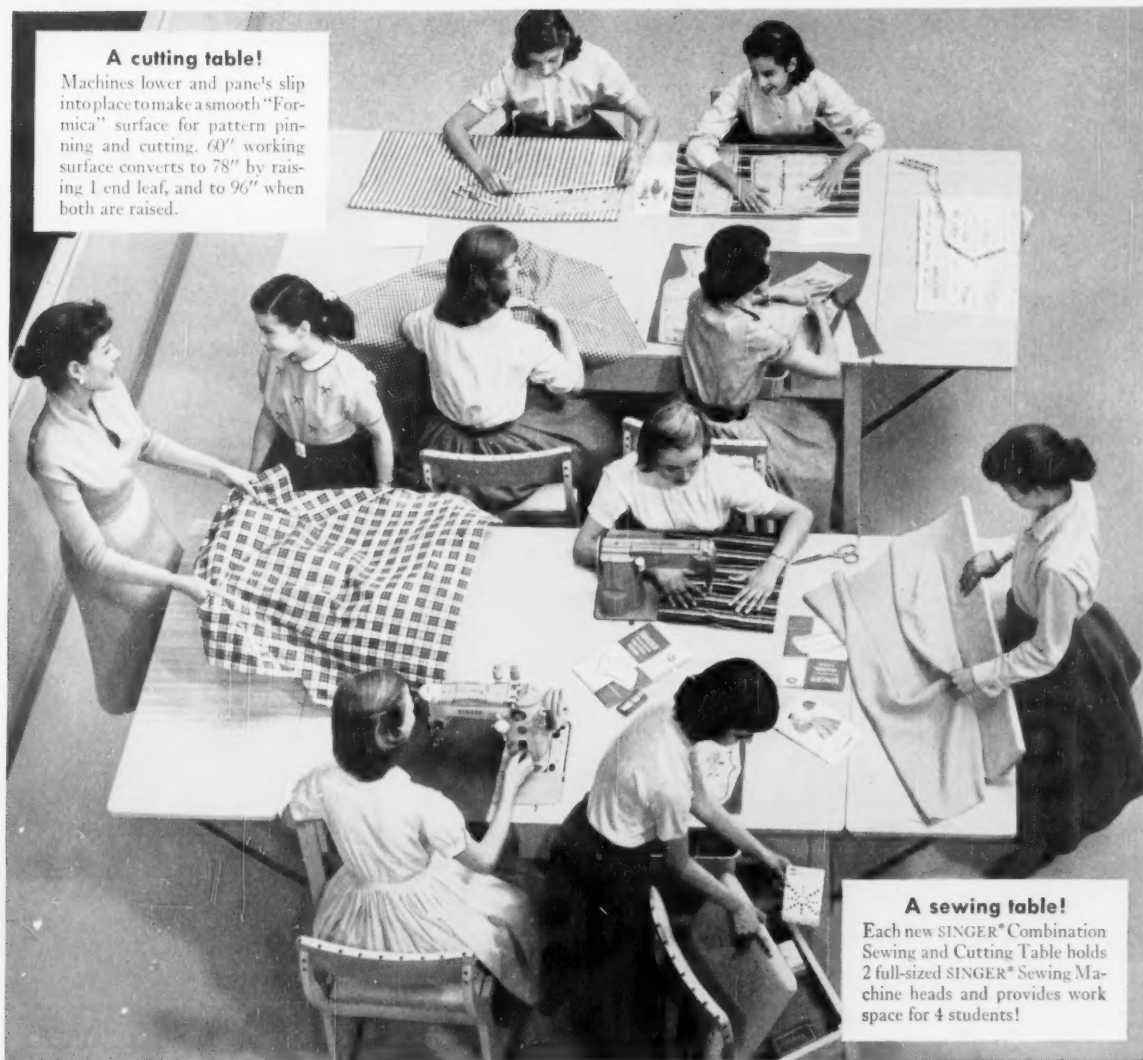
A duplex outlet complete with cast aluminum mounting box is made weatherproof by cover and plate gaskets plus a rubber grommet which seal the entire installation against severe weather conditions. The 15 ampere, 125 volt unit is quickly installed as it is only necessary to drill one hole for mounting. Pass & Seymour, Solvay Station, Syracuse, N.Y.

For more details circle #10 on mailing card.

(Continued on page 180)

A cutting table!

Machines lower and pane's slip into place to make a smooth "Formica" surface for pattern pinning and cutting. 60" working surface converts to 78" by raising 1 end leaf, and to 96" when both are raised.



A sewing table!

Each new SINGER® Combination Sewing and Cutting Table holds 2 full-sized SINGER® Sewing Machine heads and provides work space for 4 students!

Teachers and students, supervisors and administrators agree...

The SINGER Combination Table has something for everyone!

Teachers like the SINGER Combination Tables because they provide a complete sewing unit in one classroom item. They eliminate moving from machines to separate cutting tables... avoid bottle-necks... maintain order.

Students like the deep openings that accommodate their standard tote trays, and the 2 smooth-sliding drawers for handy storage. They appreciate the ample space to the left of the needle for full sweep of the garment being made.

Supervisors and Principals like the way the SINGER Combination Tables adapt to a variety of classroom arrangements—wall alignments, island formations, U formations. And they like the modern, straight-line styling of the table, available in beautiful blond or dark wood to brighten up any classroom.

Administrators like the economy features of the SINGER Combination Tables, particularly the way they adapt to conventional study classes.

The SINGER Combination Table is available at the special school discount, with any SINGER heads you prefer—Straight-Needle, Slant-Needle* or the new Swing-Needle* Automatic.

For a free folder, giving specifications and suggested classroom layouts, just mail this coupon.

SINGER SEWING MACHINE CO.
Educational Dept., 149 Broadway, N.Y. 6, N.Y.

Please send folder giving details about Combination Sewing and Cutting Table, and showing suggested classroom layouts.

Name _____
Position _____
School _____ County _____
Street _____
City _____ Zone _____ State _____



SINGER SEWING CENTERS

THERE'S ONE NEAR YOUR SCHOOL

*A Trade Mark of THE SINGER MANUFACTURING COMPANY.



Wall thermostat in each room maintains right temperature for all types of classroom activities. Temperature may be lowered during exercise period, raised again for quiet study hour.

*New thermostat,
The Honeywell Round.*
One in each class-
room makes it
possible to adjust
temperature to meet
varied activities
of children.



They need a different climate for each classroom activity

Thermostat in every room lets you vary
classroom temperature, increase "take home learning"

EFFECTIVE teaching calls for proper temperature and ventilation in every classroom situation. The exercise period, for example, is conducted best at a temperature lower than that for the study period. When blinds are drawn for audio-visual education, other temperature and ventilation problems arise. How can you control these factors?

The best way is with mechanical ventilation or air conditioning and a thermostat on the wall of each room. Such "climate conditioning" is the idea behind the Honeywell Schoolmaster Temperature Control System. Individual room thermostats allow the teacher to maintain the right conditions for classroom alertness—at all times of the day regardless of instruction methods.

In addition, the Schoolmaster System includes an indicator panel for the principal's office which gives a fingertip report on all room temperatures.

The Schoolmaster is an exclusive Honeywell development, designed for any school—new or old. No

major building alterations are necessary, as the wiring is simple.

For complete information, call your local Honeywell office, or write to Honeywell, Dept. NS-9-66, Minneapolis 8, Minnesota.

**The Schoolmaster System:
A special wall thermostat
for each room and
Principal's Monitor Panel**

Indicator panel gives the principal a fingertip report. It is wired to a special sensing element in each room thermostat to provide the principal with a push-button temperature reading for any room in the school. It functions also as an auxiliary fire detection system.



MINNEAPOLIS
Honeywell

112 OFFICES ACROSS THE NATION



School Temperature Controls

"Musical training
is a . . . potent instrument
. . . because rhythm
and harmony find
their way into . . .
the soul."
Plato



Mrs. Laura Fairman,
teacher, Grade II,
P.S. 188, N.Y.C., demon-
strating Shoninger "55"

Install

Shoninger "55" — the school "special"

Shoninger craftsmen have worked with leading school and musical authorities to create this scientifically designed, carefully engineered, ruggedly constructed, completely mobile instrument.

Its full resonant tone, quick responsive action and watchmaker precision attest to Shoninger's century-old tradition of fine quality. Its 42" overall height, direct blow action, specially built arms and fall board make it ideal for teacher and pupil alike.



Priced to meet school budgets, more than 100 school systems throughout the country have bought the Shoninger "55" since it was introduced in January 1956! Deliveries were made to 18 high schools, 23 junior high schools, 3 vocational schools and 110 elementary schools in one system alone! A record . . . to add to the many prizes won over the years by Shoninger pianos.

Write us for detailed specifications,
school prices and discounts.

NATIONAL PIANO CORPORATION • 54 CANAL ST., NEW YORK 2, N. Y.

PAGE chain link FENCE

America's First Wire Fence—since 1883



• You need a fence if the children lack protection against common hazards. And you certainly want time-tested quality in the safeguard you provide. Whether you choose heavily galvanized Copper-Bearing Steel, corrosion-resisting Aluminum, or long-lasting Stainless Steel, PAGE Fence is quality controlled from raw metal to rugged fence erected on metal posts deep-set in concrete. Available are 8 basic styles, varied by heights, types and sizes of gates, and top rails. Finally, your PAGE Fence will be expertly erected by a reliable, technically trained firm permanently located in your vicinity. For important fence data and name of nearest PAGE firm—

Write to PAGE FENCE ASSOCIATION in Monessen, Pa.,
Atlanta, Bridgeport, Chicago, Denver, Detroit, Houston, Los Angeles, New York,
Philadelphia or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

What's New . . .

Eight Improved Models in American Vacuums

The full line of wet-dry vacuum cleaners manufactured by American Floor Surfacing Machine Company has been re-designed for complete versatility. All eight models, ranging in size from three



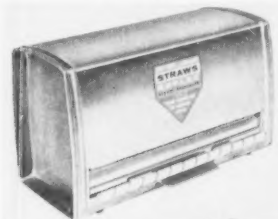
to 55 gallon capacities, are designed to perform every cleaning function for daily maintenance needs. Each model can be used for wet or dry pick-up in large or small areas, for floors, rugs and off-floor jobs.

The vacuums can be used, to remove dust and dirt from blinds, draperies, radiators, pipes, walls and ceilings and even from furnaces. They can be used for quick clean-up in special cleaning problems. The new models are offered in a variety of sizes, motors and finishes, and with free-wheeling four-caster base plate, push or pull type dollies with tool baskets. The American Floor Surfacing Machine Co., 518 S. St. Clair St., Toledo 3, Ohio.

For more details circle #11 on mailing card.

Straw Dispenser for Jumbo Unwrapped Straws

The Duplex Dispenser for dispensing unwrapped straws in complete sanitation is now available in the JS-20 Jumbo Model for dispensing unwrapped 6½,



8½ Jumbo and 8½ inch Super Jumbo Straws. The all stainless steel device dispenses one straw at a time from both sides of the dispenser and is said to have the approval of health officials. The dispenser is also available for use with regular sized and ordinary jumbo straws and was developed to health board specifications to reduce the cost of dispensing. Duplex Straw Dispenser Co., 511 N. La Cienega Blvd., Los Angeles 48, Calif.

For more details circle #12 on mailing card.
(Continued on page 182)

FORM 308

SCHOOL H. D. Plant High School

PERMANENT RECORD OF Doe, John Jr.

PARENT OR GUARDIAN John Doe, Sr. ADDRESS 317 Maple Dr.

PLACE OF BIRTH Tampa, Fla. DATE OF BIRTH 2/10/39 FROM Wilson

ENTERED 9/1952 SCHOLASTIC AVERAGE 90.54 RANK IN CLASS 60/275

SUBJECT	1st Year				2nd Year				3rd Year				4th Year				TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Chemistry																	88
Home Making Ed																	88
Physical Ed																	88
English																	88
Math																	88
History																	88
Art																	88
Music																	88
Foreign																	88
Health																	88
Physical																	88
Other																	88
Grand Total																	88

Remington Rand Photocopy Duplex

Chemistry 88 Driver Ed 88

Home Making Ed 88 Phy. Ed 88

Grand Total 88 TOTAL 88

TRANSCRIPTS *by* TRANSCOPY®

SAVE TIME FOR YOU

High School administrators are acclaiming Transcopy as a revolutionary aid in their work

Quick, accurate photocopying with Transcopy is fast replacing the time-consuming manual method of copying the hundreds of student records requested each year. Now, thanks to Transcopy, the task is accomplished in a matter of minutes — time saved can be devoted to more important administrative duties.

Transcopy faithfully reproduces every detail of any record — there is no need for proof-reading — no chance for costly, embarrassing errors. Anyone can operate Transcopy after a few minutes of instruction. It can be set up on any convenient table top or desk — plugs into any standard 110 volt electrical outlet and operates under ordinary office lighting.

Learn how Transcopy has successfully solved the transcript problem for two Florida High School Registrars. Send the coupon today requesting CH1065, "Transcripts by Transcopy."

Remington Rand

Division of SPERRY RAND CORPORATION

Room 1947, 315 Fourth Avenue, New York 10, New York

Please send me a copy of CH1065 "Transcripts by Transcopy"

NAME _____

STREET _____

CITY _____

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DIVISION OF SPERRY RAND CORPORATION



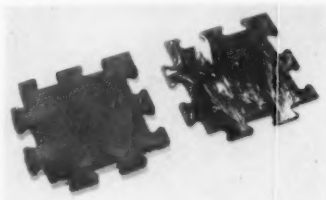
What's New ...

Safety Cushion Mat Has Interlocking Parts

Flooring for athletic rooms can be protected from cleats and spikes by the new 24 inch square Rubberlock marbled cushion mat. The Rubberlock is an interlocking feature which makes it possible to lay the flooring without cement or mastic and to remove it and lay it elsewhere should the needs change. The new type Rubberlock mat is $\frac{1}{2}$ inch thick. Rubberlock is also available in a new $\frac{1}{4}$ inch thickness for regular floors.

Rubberlock for installation under play apparatus in the school yard is known

as the Mitchell Safety Cushion Mat. It is the result of long testing and experi-



mentation and provides a resilient surface beneath play equipment to reduce the hazard of injury in case of falls.

The honeycomb cushioning underneath gives the necessary resilience to protect children. It is firm enough to supply cushioning without being hard enough to cause injury. The interlocking feature makes it easy to lay the mat with an asphalt border. **R. L. Mitchell Rubber Co., 2114 San Fernando Rd., Los Angeles 65, Calif.**

For more details circle #13 on mailing card.

SHELDON

CHICAGO

U. S. A.

SHELDON MACHINE CO., INC.
4266 North Knox Ave., Chicago 41, Ill.

Gentlemen: Please add my name to your Shop Instructors mailing list:

Name _____ ☐ School ☐ Home
School _____
Street Address _____ Zone _____ State _____
City _____

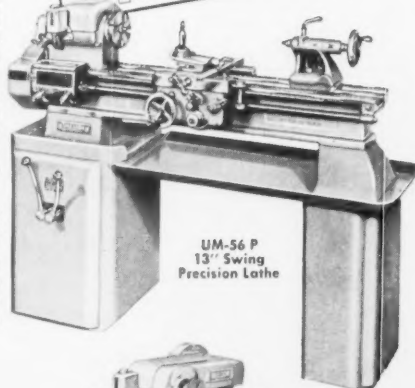
PLEASE SEND ME YOUR NEW CATALOGS DESCRIBING
☐ 10" ☐ 11" ☐ 13" Sheldon Lathes
☐ 13" ☐ 15" Sebastian Geared Head Lathes
☐ Horizontal Milling Machine ☐ 12" Shaper

Better Machine Tools for Teaching ... safer to operate, easy to learn on

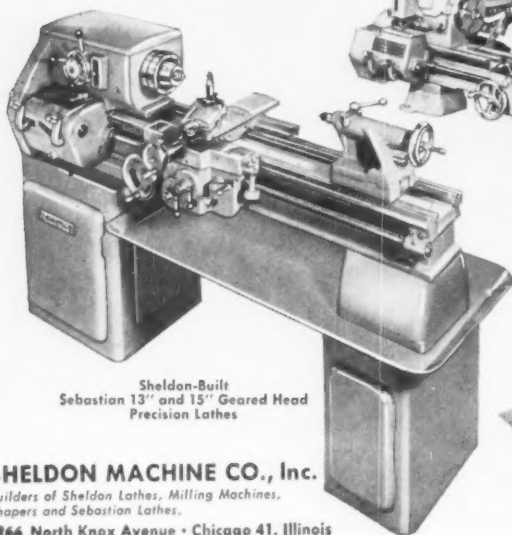
For every school shop, laboratory and classroom... (from beginning classes in industrial arts and vocational education through advanced courses in trade schools and universities)... Sheldon builds a lathe to fit each academic, space and budget requirement.

Sheldon lathes are modern in design. With their easy-to-operate controls, students can learn basic lathe operations quickly and rapidly advance to practical shop projects.

From the largest 15" swing geared head lathe to the smallest 10" swing bench lathe, every Sheldon-built lathe meets the same rigid standards... standards that insure long life with minimum maintenance requirements in your school shop.



UM-56 P
13" Swing
Precision Lathe



No. L-46 Sheldon
10" Precision Lathe

Sheldon-Built
Sebastian 13" and 15" Geared Head
Precision Lathes

SHELDON MACHINE CO., Inc.

Builders of Sheldon Lathes, Milling Machines,
Shapers and Sebastian Lathes.

4266 North Knox Avenue • Chicago 41, Illinois

Vinall Flooring in Black and White Tiles

Quality vinyl tile flooring is now available in plain black and white tiles. Offered in nine by nine inch squares, the new black and white Vinall tiles supplement the line of attractive colored tiles already available from the company. **Hewitt-Robins, Inc., Stamford, Conn.**

For more details circle #14 on mailing card.

Folding Door Allows Access to Whole Area

The new Fenestra Folding Doors glide open easily and expose the full width of storage space making every part of the closet accessible for use. At the same time, the folded door takes up little floor space. The doors are modern and attractive in design with functional construction features which prevent jumping off track, assure ample clearance,



non-sagging or warping, quiet operation, maximum service-life and no maintenance. Finger tip control is achieved through the use of nylon bushings with pivots and guides.

The doors are constructed of heavy-duty 24 gauge steel and are a full one inch deep backed by sound-deadening fillers. Doors are available in standard heights of six feet, eight inches or eight feet and can be quickly installed. Finishes include prime painted for on-the-job finishing and a factory birch-grain finish. **Fenestra, Inc., 2250 E. Grand Blvd., Detroit 11, Mich.**

For more details circle #15 on mailing card.

(Continued on page 186)



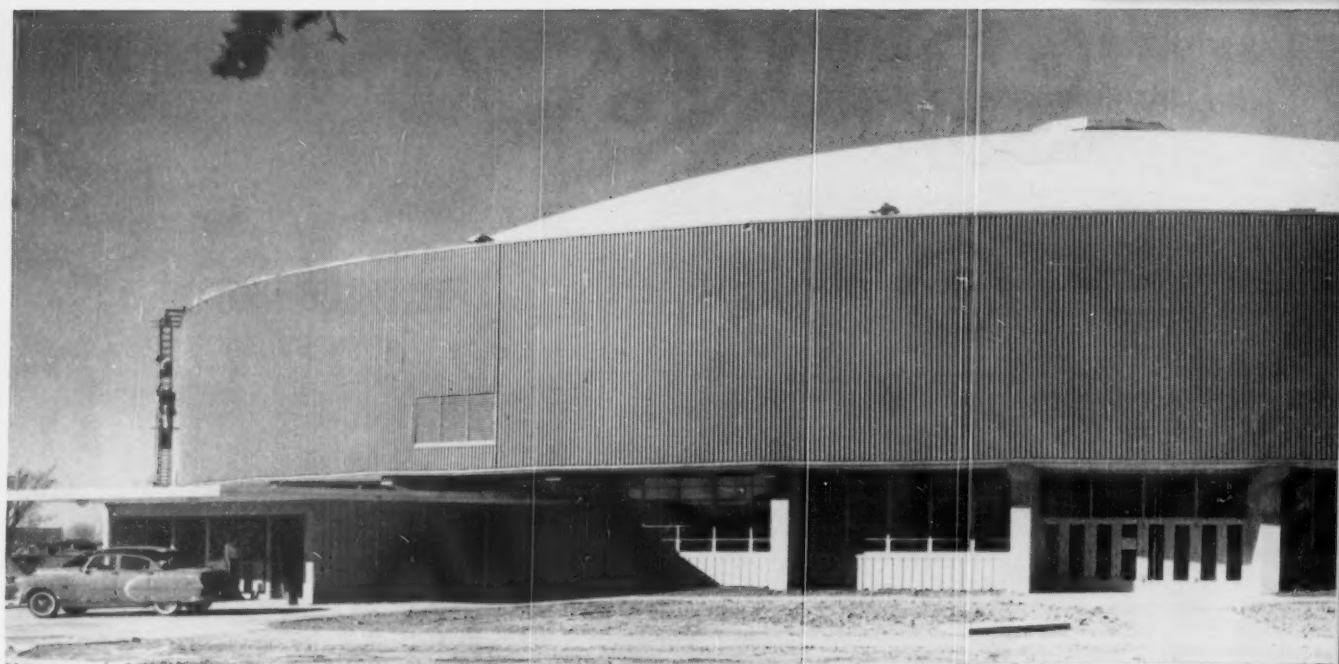
A Concept Confirmed...

The wisdom of your decision to choose Brunswick's line of school furniture has been confirmed by the thousands of other educators who purchased Brunswick this past year. This is a down-to-earth endorse-

ment of Brunswick's advanced design concept—color, comfort, versatility and flexibility. You can't buy better than Brunswick. The Brunswick-Balke-Collender Company, 623 S. Wabash Ave., Chicago 5, Illinois.

JUST ONE LINE CONTINUES TO SET THE PACE...IT'S

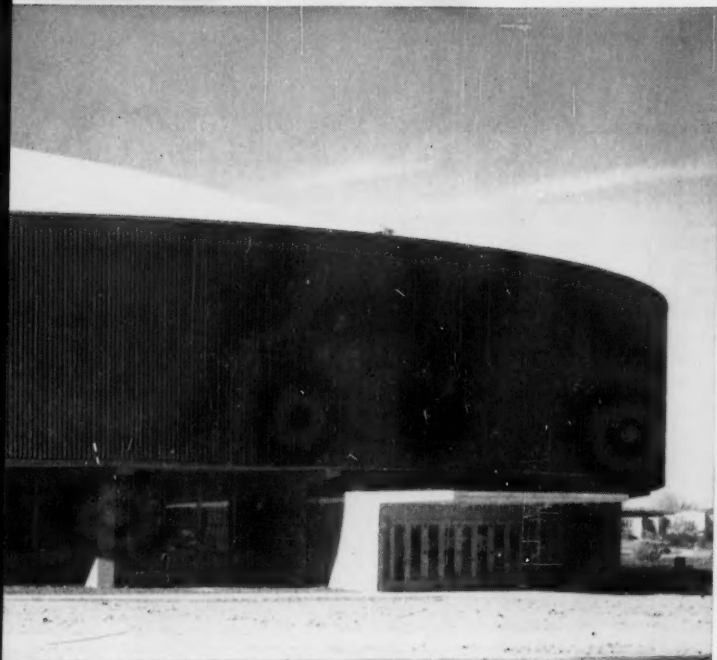
Brunswick



University of Wichita field house features unique **267-foot diameter**

THE ALL-WELDED, EXPOSED STRUCTURAL STEEL framework actually enhances the attractive interior of the building. The soffits of all trusses are painted a brilliant red which contrasts with the gray lead of the rest of the steel, emphasizing the diamond pattern.





Iamella dome of Structural Steel

432 tons of steel erected
in only 14 days

The unique lamella dome of Structural Steel which crowns the University of Wichita's new field house is the *first* such dome ever to be constructed. It was designed, developed and put to use for two practical reasons—economy and speed of erection.

Spanning 65,000 square feet, the 432 tons of Structural Steel were erected by two crews in the spectacular time of just 14 days! Starting on opposite sides of the building, the two crews worked around in one direction until closure was effected. The only false-work required was a central tower supporting the compression ring, or "lantern," at the apex of the dome. All connections were bolted during erection, then field-welded.

Built at a total cost of \$1,405,700, the ultra-efficient structure includes such features as a complete heating and ventilating system (with radiant heating in the locker rooms), and color-corrected vapor lighting for the arena. And, with peripheral seating, not one of the 10,235 seats is more than 86 feet from the playing surface.

Where economy, speed of erection, and dramatic design are the keywords of construction, that's where you'll find versatile Structural Steel. Moneywise, Structural Steel is the most economical of load-carrying materials. And, it's the strongest. It will withstand more abuse than other structural materials, effectively resisting tension, torsion, compression and shear. Once enclosed in buildings, it lasts indefinitely, requiring no maintenance.

USS STRUCTURAL STEEL

UNITED STATES STEEL

6-2289-A

UNIVERSITY OF WICHITA FIELD HOUSE. Architects: Lorentz, Schmidt, McVay, and Peddie, Wichita, Kansas. Steel Fabricator: Watkins Inc., Wichita. General Contractor: Dandlinger and Sons Construction Company, Wichita. Designer and Engineer of Lamella Roof Structure: Roof Structure Inc., Webster Grove, Missouri.



THE ROOF STRUCTURE is supported by 36 10WF39 columns. A trussed ring girder, 39 inches deep, rests on top of the columns and runs the entire perimeter of the building. Into this ring girder are framed 12 radial trusses which span to the compression ring at the apex of the roof. Also springing from the ring girder at intermediate points are curved roof trusses which intersect the radial trusses, resulting in the characteristic diamond-shaped lamella pattern.

Structural Steel may be riveted, bolted or welded, and may be erected in any weather. Since steel members are fabricated indoors, weather can have no effect on the quality of workmanship. Want more information? Return the attached coupon.

UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



SEND FOR THIS
INFORMATIVE BOOK NOW!

United States Steel Corporation
525 William Penn Place, Room 5474
Pittsburgh 30, Pennsylvania

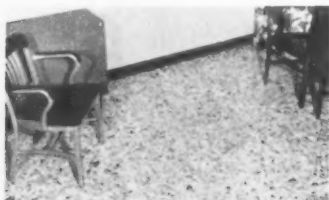
Please send me a free copy of
HOT ROLLED CARBON STEEL
SHAPES AND PLATES.



Name
Company
Address
City State

What's New ...

Plastic Floor Tile in Marble Pattern



Fine marble patterns are simulated in the new Nairon Custom Venetian Plastic Tile developed in Gold Seal. Colors are

locked in to prevent smearing and the designs are replicas of those found in the marble in famous European buildings. The design mixes well with brass, copper and stainless steel strips. Colors include Charcoal and Pink, Gray, Taupe, Green and Beige.

A second new pattern in plastic tile is known as Nairon Custom Marble and is offered in seven colors: mocha, cocoa, wood rose, almond green, black and white, platinum and charcoal. The new tile is described as the result of a new formulation that gives exceptionally high resistance to soiling and indentation.

A third new pattern, Nairon Custom Sequin, gives a "sequin" effect and is offered in 19 colors. The plastic tiles have built-in dimensional stability, exceptional recovery from heavy loads, high resistance to abrasion, and are grease, oil and chemical resistant. **Gold Seal Division, Congoleum-Nairn Inc., 195 Belgrave Drive, Kearny, N.J.**

For more details circle #16 on mailing card.

Modern Design in Drinking Fountain



The new No. 5650 Halsey Taylor Drinking Fountain is designed to harmonize with modern architecture in educational and other institutional buildings. The completely new design is executed in heavy vitreous china. The drinking fountain is available with or without a glass filler. In addition to use in corridors, cafeterias and other general areas, it is adapted to the semi-recessed cuspidor for use in gymnasiums. **The Halsey W. Taylor Co., Warren, Ohio.**

For more details circle #17 on mailing card.

Small-Sized Tote Box of Wear-Ever Aluminum

Designed for use in transporting and storing meats, poultry, fruit, vegetables and other foods, the new Wear-Ever



Aluminum Tote Box is light in weight and easy to handle. The small-sized box is 24 inches long and has a width outside top of 16 1/8 inches. It is designed for secure stacking when filled and space-saving nesting when empty. It is easy to lift and carry the small-sized Tote-Box, even when filled. Boxes can be stamped at the factory with name and checking numbers without extra cost, thus reducing the danger of loss. **The Aluminum Cooking Utensil Co., Inc., New Kensington, Pa.**

For more details circle #18 on mailing card.
(Continued on page 189)

5 ROWLES CHALKBOARDS

Each one backed by a 10 year guarantee of perfect classroom service!

ENDURAROC CHALKBOARDS	1/4" thick Cement-Asbestos Base	The finest chalkboard you can buy. A strong 1/4" cement-asbestos panel that actually defies time and wear. Washable. Guaranteed for 10 years.
DURA-BEST CHALKBOARDS	3/16" thick Cement-Asbestos Base	An ideal classroom chalkboard. Rowles "Velvetone" Writing Surface on a 3/16" thick cement-asbestos base. Easy writing. Easy to erase. Washable. 10 year guarantee.
SUPER PERMASITE CHALKBOARD	7/16" thick Hardboard Base	A strong, long wearing chalkboard made of laminated hardboard. Has easy writing "Velvetone" Surface. Full length joining spline for installing uninterrupted lengths of chalkboard. Washable and guaranteed.
PERMASITE CHALKBOARD	1/4" thick Hardboard Base	All the outstanding features of Super Permasite, but 1/4" thick. A very dependable chalkboard with a smooth writing surface. Resists moisture and humidity. Washable. Backed by 10 year guarantee.
DUROPLATE CHALKBOARDS	1/4" thick 5-ply Wood Fiber Base	A proven chalkboard with an excellent writing surface at a minimum cost. Protected against moisture and humidity. Can be used in any climate. Washable. 10 year guarantee.

ROWLES
School Equipment

There's a Rowles Chalkboard to exactly fill your needs. Five classroom tested boards to choose from . . . in either See-Green or black. Ask your local Rowles School Equipment Dealer for samples and complete data, today.

E. W. A. ROWLES COMPANY ARLINGTON HEIGHTS, ILLINOIS

One initial investment keeps your Home Ec. Lab up-to-date for years!



HERE'S HOW the WESTINGHOUSE PLAN WORKS

FOR MAJOR APPLIANCES!

1. Schools buy any number they need of these new Westinghouse Appliances at about $\frac{1}{2}$ retail cost:

Speed Electric Ranges
Refrigerators
Upright Home Freezers
Laundromat Automatic Washers
Electric Clothes Dryers
Combination Washer-Dryers
Electric Water Heaters

Automatic Dishwashers
Food Waste Disposer

2. No-charge replacement of appliances with new models continues every year under the School Plan agreement.

3. Any service required under normal usage is provided by the Westinghouse Dealer or Distributor at no charge.

4. Budgets can be stretched to

the utmost, because the annual available funds may be used progressively over the years to help you completely equip your home ec. lab.

5. Helpful and authoritative teaching aids are supplied every year, without charge.

6. Personal counsel on the care and use of the appliances can be obtained through the servicing dealer.

FOR PORTABLE APPLIANCES!

Schools signing up for the Westinghouse School Plan can buy these new Westinghouse Portable Appliances at a special low cost. Thereafter, they become the school's property for use and later resale, and are not replaced. How-

ever, schools can buy new models every year as they desire. (Note: Schools already signed up on the School Plan will continue to get replacement on those portable appliances they originally purchased until the contract runs out.)

Vacuum Cleaners
Roaster Oven

Rotisserie and Accessories
Cook-N-Fryer
Food Mixers and Accessories
Coffee Makers
Toasters
Grill-N-Waffler
Electric Fry Pan
Electric Irons
Hot Plates

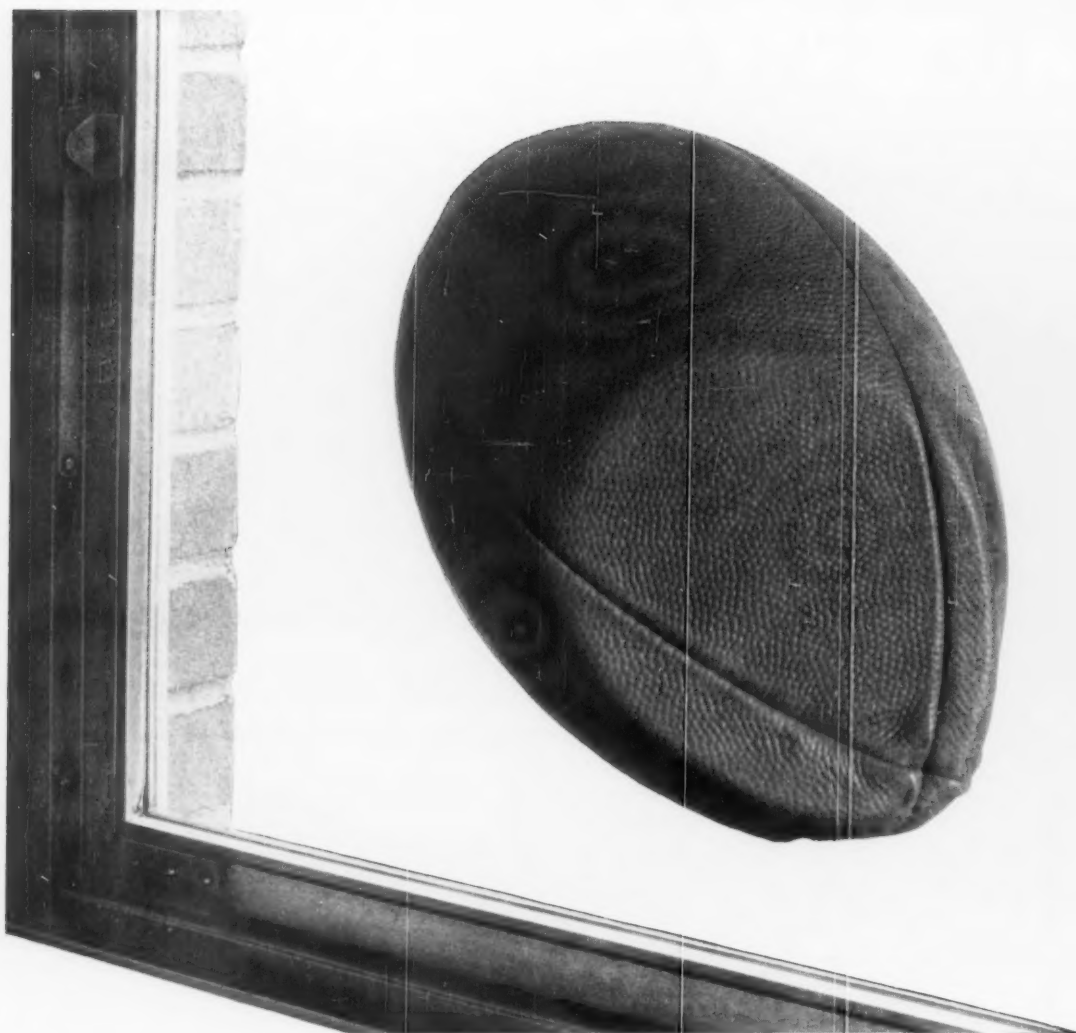
NEW LESSON PLANS AVAILABLE:

Those schools using the Westinghouse school plan will be automatically mailed the new, revised Lesson Plan Series on all of the major appliances listed above. If you would like to know more about these Lesson Plans and other helpful Westinghouse Teaching Aids, write to:

WATCH WESTINGHOUSE
WHERE **BIG** THINGS ARE HAPPENING FOR YOU!



Westinghouse Electric Corporation
Major Appliance Division
Consumer Service Department
WN-456
Mansfield, Ohio



No penalty on this play — thanks to TUF-FLEX

No broken window *this* time—that glass is *Tuf-flex*®! *Tuf-flex* tempered plate glass is 3 to 5 times tougher than regular plate glass of the same thickness. Yet, it's as clear as any other fine plate glass. It will save you a lot of money in repair and replacement bills— particularly for windows facing the playground. And in corridor and gymnasium windows.

The column at the right will answer questions you may have. If you'd like to know more, just write to the address at the bottom of the column. You can order *Tuf-flex* by calling your local Libbey-Owens-Ford Glass Distributor or Dealer (listed under "Glass" in the yellow pages).

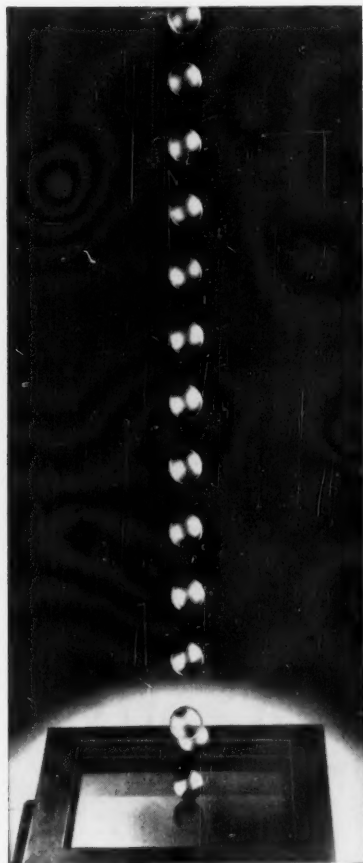


TUF • FLEX GLASS

LIBBEY • OWENS • FORD *a Great Name in Glass*

What's New ...

TUF-FLEX FACTS



THIS TEST shows a half-pound ($1\frac{3}{4}$ " diameter) steel ball being dropped 10 feet on a piece of $\frac{1}{4}$ "-thick Tuf-flex tempered plate glass. The ball bounces off without damaging the glass. If maximum impact resistance is reached, Tuf-flex disintegrates into small, relatively harmless particles, not big jagged pieces.

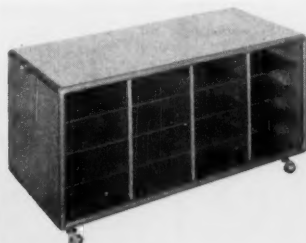
MAKE SURE that your architect orders the exact sizes of Tuf-flex needed. It cannot be cut to make it fit!

For further information, write to Dept. 8996, Libbey-Owens-Ford Glass Company, 608 Madison Avenue, Toledo 3, Ohio.

**LIBBEY
OWENS
FORD**

Cubicle Storage Cabinet in Fleetwood Classroom Line

A handy cabinet with cubicles for the storage of supplies, toys, rubbers, class material or any other material is available in the Fleetwood line of classroom



furniture. Designed by Henry P. Glass, this new cabinet in the lightweight modular line is another exceptionally strong yet easily movable unit for adding versatility and effectiveness to the flexible classroom. It is constructed with tubular steel frame and wood sections with highly resistant plastic top. Fleetwood Furniture Co., Grand Haven, Mich.

For more details circle #19 on mailing card.

Portable Hydrotherapy for Athletes and Handicapped

The Whirlbath is a portable hydrotherapy unit that is easily attached to any standard bathtub. It requires only normal water pressure for operation and has no electrical connections, motors or other mechanisms to get out of order. It is sturdily fabricated of chrome plated bronze and stainless steel, and works on as little as 20 pounds per square inch water pressure. Temperature is con-



trolled in the same manner as drawing a bath and direction of water flow can be aimed at the afflicted area by turning the outlet at the bottom of the unit.

Whirlbath will provide for inexpensive hydrotherapy for treatment of injured or sore muscles and for other purposes in the athletic department. It can also be used effectively in schools for handicapped children to give hydrotherapy treatments at low cost. Whirlbath, Inc., P. O. Box 82, Elmont, N. Y.

For more details circle #20 on mailing card.
(Continued on page 192)

HERE'S A NEW IDEA FOR SCHOOL *art teachers*



- FOR FINGER & BRUSH PAINTING
- FOR SCREEN PRINTING
- FOR PAINTING MODELS

• A refreshing discovery that is an exciting new medium for all ages! Staley's Liquid Starch mixed with Prang Powder Tempera and Colored Chalks has scores of practical applications for finger painting, dripless easel painting, stage props, modeling and countless Harlequin arts.

Add a new lilt to your teaching . . . new savings to your art budget with this remarkable tie-in medium.

See your Prang Man for more details. Write for sparkling booklet of creative uses. Dept. NS-55

a THE AMERICAN CRAYON COMPANY
SANDUSKY OHIO • NEW YORK

If you're not in the book *you're* *a man without*



. a country
 a state
 a county
 a town
 a party
 a street
 a school
 a *vote*

Look at all the things you can lose, if you're not a registered voter.

If you're not in the book, you lock yourself out of the elections. The polls are closed to you. You can't vote on streets, or schools, councilman or mayor (not to mention congressman, senator or president). You don't even have the right to *complain* about your government and the way things are run!

But more than that, you cut yourself apart from your neighbor next door, your friends at

the shop, your fellow members in union or club.

You lose the right to look that boy of yours in the eye when he wants to know if you're doing your part.

And you lose the self-respect that comes from knowing you can walk into the polls on Election Day—the one place in the world where all free men are really equal. Isn't it too much to risk for the little time that registering takes?

Get your name in the book
—and do it now!

Is your name in the book?



Better Floor Maintenance with new Speed, Ease and Economy



**REALLY
MOBILE**



Glides over low obstructions;
Climbs ramps and stairs;
Rolls through narrow places.

Caboose Carrier keeps tools
and supplies ready for work.



Churchill's *VAC* The Versatile Mobile Power Unit FOR CLEANING, SCRUBBING, DRYING, DUSTING, POLISHING

A custodian's dream... cleaning power, versatility and mobility combined in one new unit. Work moves faster because of Vac's unique mobility and full range of tools for every cleaning job on every surface. Means less expenditure of funds for equipment. Meets the needs of schools and institutions of all sizes.

Takes much less effort to operate. Glides over sills, carpet edges, raised floors; climbs ramps and stairs without lifting; rolls easily between rows of desks or chairs, filing cabinets, etc. Accordion type hose bends and stretches to reach awkward or high places.

Save work, time, money with a Vac. Call your Churchill distributor or representative, or write:

CHURCHILL MANUFACTURING COMPANY
GALESBURG, ILLINOIS



"17" FLOOR MACHINE FOR CLEANING, SCRUBBING, DRYING, DUSTING, POLISHING

in
3
sizes



FAST, LIGHTWEIGHT, SELF-PROPELLING

The absolute tops for easy maintenance of floor surfaces only. Weight and speed balanced for ease in handling. Handle fully adjustable for angle and length. Heavy duty motor operates planetary type gear drive. Designed to operate under low furniture. Retractable truck wheels. Available with full range of attachments in 17", 20" and 23" brush diameters.

FOR SUPERIOR FLOOR AND BUILDING MAINTENANCE MATERIALS AND TOOLS

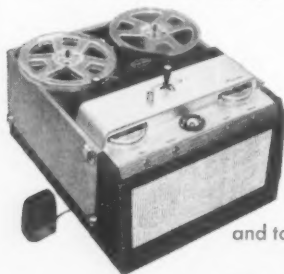


Exclusive with

PENTRON

TAPE RECORDERS

Unimagic single-lever control is pure simplicity. This new Pentron development does everything . . . Record, Play, Fast Forward and Rewind, all at the flick of a finger.



Pentron offers professional quality sound, gadget-free features and rugged design. See it — try it — specify Pentron!

The complete line . . . tape recorders and tape players — list prices from \$139.95.

Send for full details, now!

PENTRON

777 SOUTH TRIPP AVENUE
CHICAGO 24, ILL.

Please send literature on tape recorders

Name _____

Address _____

City & State _____

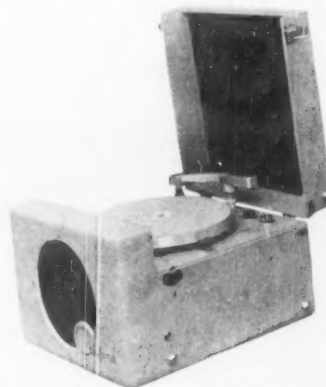
Canada: Atlas Radio, Ltd., Toronto



What's New ...

Phonograph Features Continuous Variable Speed Turntable

An exclusive center drive continuous variable speed turntable is introduced with the new Califone Celebrity 7V-7 Phonograph. This unusual feature eliminates the need for cones, idlers and belts.



The speed range is from 16 to 88 RPM, with an illuminated stroboscope for adjusting exactly to all speeds.

Other features of this 1957 model include a five-watt amplifier with an eight-inch self-contained extended range speaker, a pickup arm which balances upward, a cork-topped aluminum turntable which is said to prevent records from picking up lint, a 45 RPM adapter built into the turntable, a new cartridge and needle arrangement for easy needle change, and a spring loaded cushion arm rest which protects the cartridge and needle. An output jack for an additional speaker for large audience coverage, and headphones for quiet listening are optional equipment. Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.

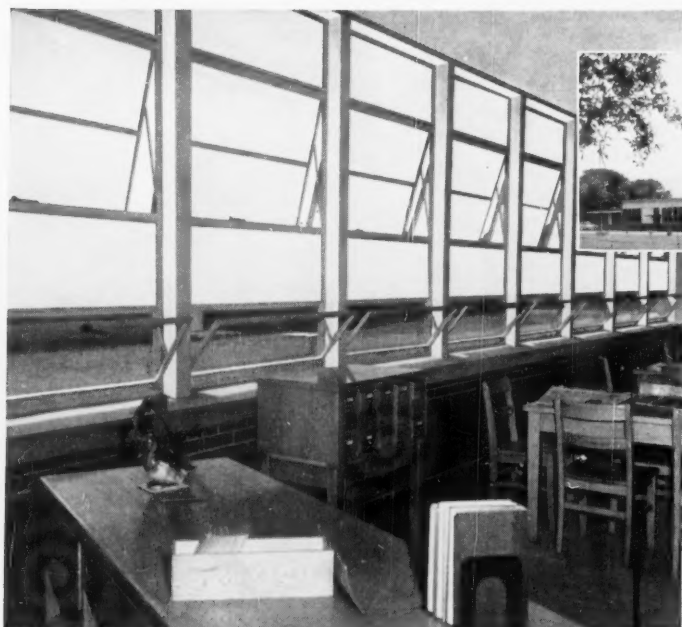
For more details circle #21 on mailing card.

Live Oxygen Cleanser Cleans Utensils Without Scouring

AerVoiD Live Oxygen Cleanser, designed to clean AerVoiD Carriers, is also effective in cleansing other cooking utensils. It cleans without rubbing, scrubbing or scouring, thus eliminating time consuming labor. It is described as removing dirt, scale, tarnish and stains without any manual contact other than brushing it on. Cooking utensils and other food service equipment is cleaned quickly and thoroughly with minimum labor and is said to require less frequent cleaning.

Live oxygen is combined with other ingredients so that it is held in suspension and released in the cleaning process. The new cleanser is non-toxic, even beneficial to the hands, and accidentally taken internally would have no ill effects, according to the manufacturer. Vacuum Can Company, 19 S. Hoyne Ave., Chicago 12.

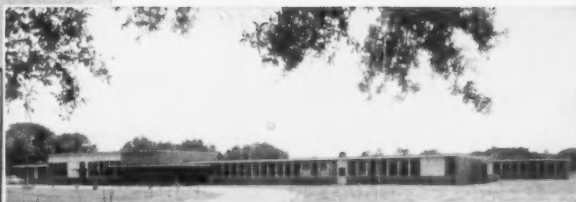
For more details circle #22 on mailing card.
(Continued on page 194)



James Island High School, James Island, South Carolina

Architect: Augustus E. Constantine

Glazier: Pittsburgh Plate Glass Co.



Schools Select COOLITE for Controlled Daylighting in Sidewall Sash and Skylights

Both these modern schools, located in the sunny South, are able to take fullest advantage of natural illumination through the extensive use of Coolite, Heat Absorbing, Glare Reducing Glass. Students can see without squinting, for Coolite cuts harmful glare, floods rooms with copious quantities of softly tinted daylight, diffused deep into the area by the handsome Luxlite pattern.

Awning-type windows of Coolite, providing eye-easy lighting and air circulation control in the

MAKING THE MOST OF

Sunshine



East Gulfport Elementary School, Gulfport, Miss.

Architect: Smith & Dawson



James Island High School, are combined with a lower vision strip, a window treatment fast growing in popularity. The East Gulfport Elementary School utilizes a corridor-long skylight to brighten the hall and illuminates adjoining class rooms with "borrowed light".

Coolite's heat absorbing abilities keeps interiors comfortably cool even under such wide expanses of glass. Students see better, feel better, work better under Coolite, the Heat Absorbing, Glare Reducing glass by Mississippi.

When you build or remodel your school buildings consider Coolite for quality-controlled daylighting. Available through most leading distributors of quality glass.



MISSISSIPPI Glass COMPANY

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SAINT LOUIS 7, MO.
FULLERTON, CALIFORNIA

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

Vol. 58, No. 3, September 1956

Write for free copy,
"Better Daylighting For
Schools". Address Dept. 15.



*"I LIKE
ALPHACOLOR
BRILLIANTS
BECAUSE THEY'RE SO
EASY TO USE!"*



**Alphacolor
Brilliants**

**ARE WINNING THE PRAISE
OF STUDENTS, TEACHERS
AND SUPERVISORS**

BECAUSE:

THEY'RE SO EASY TO USE

The semi-solid cakes of highly concentrated color instantly release strong, opaque tempera at the touch of a wet brush. Use more water if transparency is desired. And they are easy to apply to almost any surface—paper, acetate, glass, metal, cork, etc. Ideal for all art and art craft color work!

NO ADVANCE PREPARATION

Nothing to mix, nothing to spill, nothing to spoil. No tedious clean-up when the class period is ended.



24 SPARKLING, BRILLIANT COLORS

Pleasing palettes of 24, 12, 8 and 4 colors, and in INDIVIDUAL color cakes, REGULAR and "BIGGIE" Size.

WRITE TODAY

FOR YOUR

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One Regular Size Brilliant, plus full information, sent FREE to teachers.



ACTUAL
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WEBER COSTELLO COMPANY
CHICAGO HEIGHTS, ILLINOIS

Manufacturers of: Chalkboard • Chalk •
Erasers • Art Material • Maps • Globes

What's New ...

**Single-Unit Convenience
in Study Top Desk**

Model 789 Study Top Desk is designed for pupil convenience with the large sturdy steel book box which is easily accessible by finger-tip control of



the lift-lid. Books, papers and accessories will not fall out of the completely enclosed box. There is also a three inch front-to-back adjustment between the book box and the top which has ample working area.

Desk tops are available in heavy hardwood plywood or in plastic. Seat and chair back are constructed of curved plywood. The heavy gauge tubular steel frames are available in five metal finishes. Griggs Equipment, Inc., Box 630, Belton, Tex.

For more details circle #23 on mailing card.

**Plastic Tumbler and Dish Styles
Expand Cloverlane Line**

The newest additions to Cloverlane melamine dinnerware meet a variety of needs. The new Starlane Tumbler, made of break-resistant plastic, is shatterproof



and lightweight, stacks without sticking and has a long service life. The Starlane comes in a five ounce fruit juice tumbler, a 9½ ounce water tumbler and a 12 ounce ice tea tumbler.

The added styles and sizes rounding out the dinnerware line include a nine inch oval platter, an 11½ inch oval platter, an eight inch luncheon plate, a 10 inch dinner plate and a 14 ounce soup coupe. Chicago Molded Products Corp., Dinnerware Div., 1020 N. Kolmar Ave., Chicago 51.

For more details circle #24 on mailing card.

(Continued on page 198)



Behrens

**Portable Water Bubbler
... for All Sports**

Recommended by Health Authorities and Coaches • Carries cool, safe drinking water anywhere • Streamlined Stainless Steel tank • Rubber tired wheels for easy rolling • Two modern sanitary push-button fountains for steady pressurized water flow. Easy to fill, ice, clean. Five gallon capacity.

Behrens MFG. CO. Inc.

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No. 180C Standard Filmstrip Library Plan files and controls distribution of 180 filmstrips. Ideal for department use and for the growing library. Ideas and material for organizing and administering a filmstrip library included. Can be used for 2x2's also.

Heavy-gauge steel cabinet, silver-gray finish. Any drawer equipped for 2" x 2" slides at small extra cost. Lock-stack with additional units or \$29.80 2- and 6-drawer units ...

Many other larger and smaller filmstrip library plans also available

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BURROUGHS SENSIMATIC



Earlham's Carpenter Hall houses the administrative and accounting offices as well as many classrooms.

WHEREVER THERE'S BUSINESS THERE'S



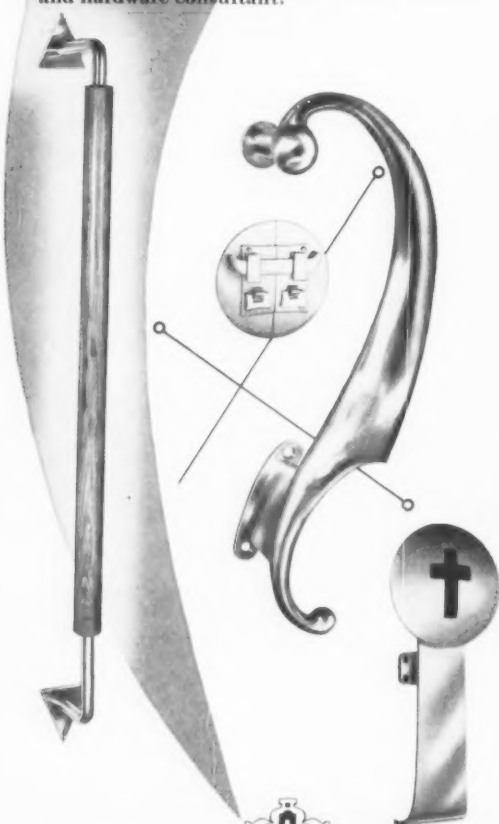
Because of the machine's extraordinary versatility, speed, accuracy and simplicity, only one Burroughs F 300 Sensimatic is needed to handle all the accounting operations of Earlham College.

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It is our firm intent to faithfully produce Architectural Hardware that complements any motif. Shown here are a few of our most recent.

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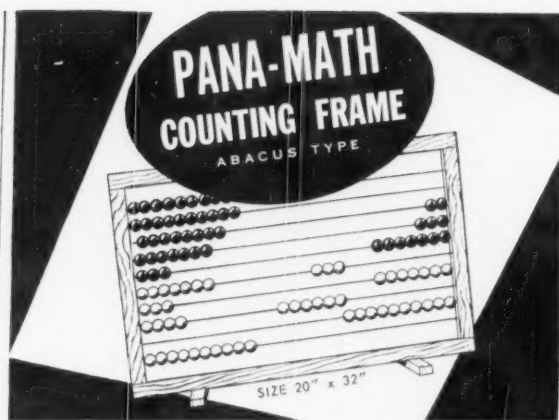


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Pana-math is a versatile classroom counting frame for incidental learning of the important concepts of arithmetic. The ancient abacus is now adapted as a modern aid to visualize numbers, groups and relationships by actual arrangement of beads. Sturdily constructed of 13/16" hardwood the frame has 10 removable push-spring rods each with 10 colorful beads. Specify Pana-math for all new or replacement counting frame equipment. (Pat. No. 2,655,737)

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operate all classroom sched-
ules automatically!

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**SYNCHRONOUS
PROGRAM CLOCKS**

NEW! MULTI-CIRCUIT

Operates up to 5 separate sched-
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12 or 24 hour models. Signals
from 2 to 25 seconds duration.
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movements perfectly synchronized;
set simply by turning clock hands.
Use pushbuttons without disturbing
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ONE & TWO CIRCUIT

Activates 1 or 2 circuits on pre-
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perfect synchronization. Push but-
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MONTGOMERY MFG. CO.
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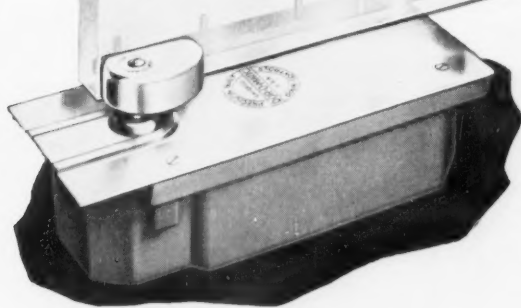
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DOR-O-MATIC INVISIBLE DOR-MAN NOW AVAILABLE IN 2 MODELS

If you wish to have completely automatic door controls, choose the Invisible Dor-Man . . . in carpet-actuated or handle-actuated models. Either type will open your doors quickly, quietly, automatically.

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Select Dor-O-Matic for metal, glass, or wood doors. Installed with any one of them, Dor-O-Matic gives uniform opening control and produces a positive, 2-speed, door closing action . . . yet your door retains an eye-appealing appearance.

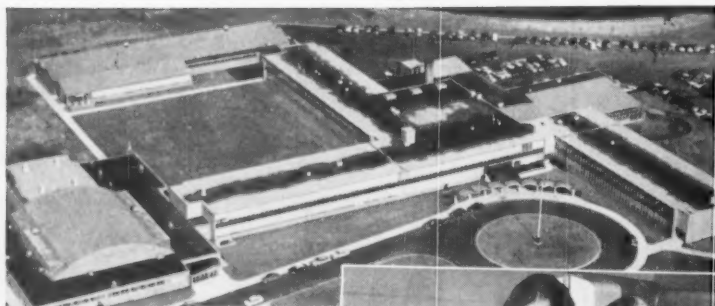
Dor-O-Matic's special protective features include a positive back-stop and built-in hold-open device (optional). They protect doors and walls. Safer for children, too. Simple design and finest construction assure long, trouble-free service. Choose yours now from 31 models.

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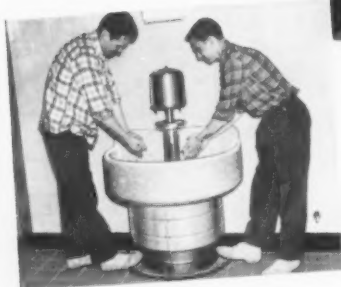
IN CANADA: Dor-O-Matic of Canada, 550 Hopewell Ave., Toronto 10, Ont.
EXPORT REPRESENTATIVES: Consultants International, 11 W. 42nd St., New York 36



Yes...
**This Fine
 Warwick
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 Has the Most
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Boys and girls like Bradleys, too, as installed in Warwick Veterans Memorial High School, Warwick, R.I.



Architects: MacConnell & Walker, Apponaug, R.I.

General Contractor: E. Turgeon Construction Co., Inc., Providence, R.I.

Plumbing & Heating Contractor: Joseph P. Cuddigan, East Providence, R.I.

**NO FAUCETS TO TOUCH... BOWL IS SELF-FLUSHING.
 RUNNING SPRAY OF TEMPERED WATER...
 AT THE TOUCH OF THE FOOT.**

Whether two, three or five wash, Bradley Washfountains (Wall Type) serve clean running water at the touch of the foot. No faucets to touch, no chance of spreading infections. Bowl does not collect used dirty water, janitor work is reduced—the maximum in sanitation provided.

Bradleys are made in the semi-circular wall type 36-in. and 54-in. diameters and in full circle models. The larger models accommodate 8 to 10 students simultaneously. For specifications write for complete Catalog 5601...BRADLEY WASHFOUNTAIN CO., 2207 W. Michigan St., Milwaukee 1, Wis.

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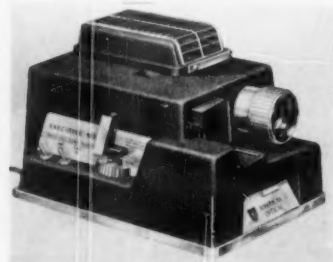
Write for
 Catalog 5601



What's New ...

Automatic Slide Projector in Two Sizes

The new AO Executive Automatic two by two Slide Projector is offered in both 300 and 500 watt models. New features include modern design with



the lower silhouette, a new optical system and automatic changer. Both the 300 and the 500 watt models have a five inch focal length lens with a speed of f3.5 and an improved condensing system. The latter may be removed as a unit and opened like a book for easy cleaning.

The new AO Automatic Changer uses only one simple action to insert, return and refill slides and advance the tray. The new filtered shutter arrangement synchronized with the automatic changer reduces eye fatigue by eliminating complete blackout during slide changes. The illuminated numeral indicator on top of the projector shows the position of the tray in the changer. The trays are made of durable plastic and both models are equipped with the universal 40 slide tray. All controls are within fingertip reach of the operator. Cool operation is provided through the oversize motor driven fan and the new louver design. The AO Executive is made of die-cast aluminum finished in chipproof baked enamel. It is light in weight and is available in a new luggage type carrying case of solid wood construction covered with scuffproof fabric type vinyl. **American Optical Co., Chelsea, Mass.**

For more details circle #25 on mailing card.

Anti-Slip Floor Wax Is Self-Polishing

Super Anti-Slip Safety Floor Wax is a liquid self-polishing product applicable to all types of floors. The Simoniz additive, Ladium, combines maximum slip resistance with long wear and high gloss qualities. Floors finished with the new wax can be repeatedly damp mopped because of the high resistance to water. Luster is easily restored by buffing. The new product does not leave stain or build-up and stripping is quick and easy. Minimum maintenance with a safe surface are features claimed for the new product. **Simoniz Company, Commercial Products Div., 2100 Indiana Ave., Chicago 16.**

For more details circle #26 on mailing card.

(Continued on page 200)



Independent-fold seat action with the No. 73 shaped-steel seat permits easier passing, minimum row spacing of 30" back-to-back.

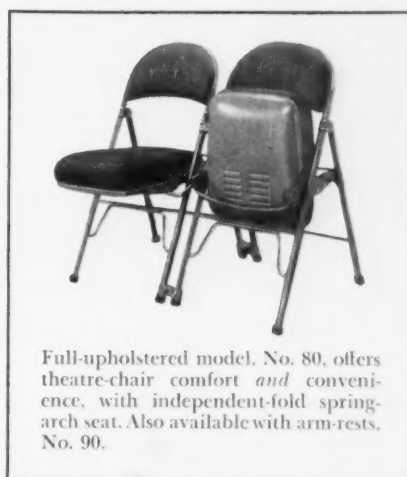
Now . . . American Seating offers space-conserving independent-fold seat action in every price class

American Seating's spacesaving independent-fold seat action has made the greatest advance in folding chairs in 25 years. And now this feature is available for seat styles in all price ranges, including shaped steel, plywood, upholstered, and spring-arch.

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For more information on all-new independent-fold American Seating Folding Chairs, contact your American Seating man, today!



Full-upholstered model, No. 80, offers theatre-chair comfort and convenience, with independent-fold spring-arch seat. Also available with arm-rests, No. 90.

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**THE PERFORMANCE-PROVED TOWELS
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Here are the towels proved by the time test of performance and value. Famous McArthur Super-Gym and Super-Turk Towels are good for 350-500 uses and launderings . . . because of the use of finest quality, triple-twisted two-ply yarns; heavy woven tape selvage edges; full 20" x 40" shrunk size. It all adds up to better towels at lower cost. Specify McArthur for your best school towel buy. Write today for information.

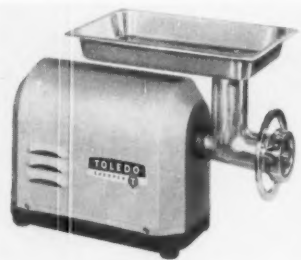
GEO. McARTHUR & SONS, INC.
BARABOO, WIS.

NEW YORK STATE REPRESENTATIVE: Vern Volland, 19 Fairchild Drive, Eggertsville 21, N.Y.

What's New ...

Small Unit Meat Chopper Has Maximum Cutting Capacity

A new 1/2 h.p. Toledo Meat Chopper can chop nine pounds of meat per minute.



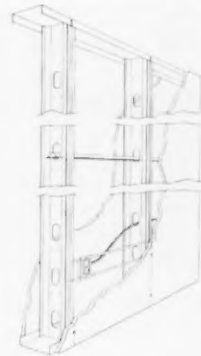
ute. A spiral fluted cylinder and deep fluted feed screw give Model 5125 its maximum cutting efficiency.

Costly breakdowns resulting from a sheared cylinder pin are eliminated by the use of precision ground flat sided plates. The unit may be conveniently handled from either side as the switch is mounted at the end opposite the cutting group. Model 5125 is finished in durable silver hammertone and is regularly supplied with a large capacity safety-type feed pan and stomper. Toledo Scale Co., 1023 Telegraph Rd., Toledo 12, Ohio.

For more details circle #27 on mailing card.

Non-Bearing Partitions for Low-Cost Erection

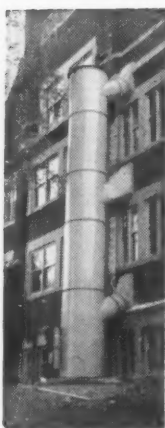
Permalok is the name given to a new system for the low-cost erection of non-bearing partitions. It consists of nailable



steel studs, track and bridging and the necessary washers. Virtually any type of metal lath or other panel can be secured to Permalok studs as simply as to wooden ones. A nailing device grips the nail or screw to prevent loosening. Either ratchet nails or screws can be used for the attachment of collateral materials.

Permalok studs are made in two sizes, the smaller with a solid web and the larger punched with openings for the passage of pipe and conduit and the attachment of bridging members. All members are made of corrosion-resistant electro-galvanized steel. Penn Metal Co., Inc., 205 E. 42nd St., New York 17.

For more details circle #28 on mailing card.
(Continued on page 202)



Spiral Type

POTTER Slide Fire Escapes

Do provide a safe and quick means of exit in an emergency. This has been proven in 30 instances in which they have been successfully used under actual fire conditions.

Adaptable to all types of occupancy and for installation on the interior as well as the exterior.

Return the coupon below for information and a representative if desired.



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- ☐ Mail copy of new catalog.
☐ Have fire escape engineer call with no obligation.

Submit estimate and details on.....escapes.

Signed.....

Address.....

City.....

Light, Beauty and **QUIET** attend High School

Lessons come easier where quiet prevails. That's why America's schools with ceiling installations of Acousti-Celotex materials are discovering new effectiveness in teaching and study. These sound-absorbing products check disturbing chatter and clatter in classrooms, study halls, corridors, libraries, gyms, cafeterias, auditoriums. Both students and teachers benefit greatly from the resulting *quiet comfort*.

Functional and Beautiful—Acousti-Celotex Tile provides the low-cost, efficient answer to the noise problem. In the installation illustrated, sound and light conditioning are integrated in one attractive ceiling on a Celotex suspension system; easy access is permitted to above-ceiling area for maintenance of utilities. The tile has excellent sound-absorption value, is quickly installed, needs no special maintenance. The Cane Fiber Tile may be painted *repeatedly* as well as washed, without loss of sound-absorbing properties.

An Acousti-Celotex Exclusive—This is most significant: You do not pay one cent for the most important part of Acousti-Celotex Sound Conditioning . . . 30 years' sound engineering experience—in acoustical installations of all types, under all conditions.

Mail Coupon Now for a Sound Conditioning Survey Chart that will bring you a *free analysis* of the noise and acoustical problems in your school plant plus a free factual booklet, "Sound Conditioning for Schools and Colleges." No obligation.



Corridor of Melvindale High School, Melvindale, Michigan, showing ceiling of Acousti-Celotex Lumicel® Translucent Panels (Ripple Pattern) and Perforated Cane Fiber Tile. Architect: Eberle M. Smith Associates, Inc. Acousti-Celotex Contractor: R. E. Leggette Co., Dearborn, Mich.

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Products for Every Sound Conditioning Problem—The Celotex Corporation, 120 S. LaSalle Street, Chicago 3, Ill. In Canada: Dominion Sound Equipments, Ltd., Montreal, Quebec.

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The Celotex Corporation, Dept. M-96
120 S. LaSalle St., Chicago 3, Illinois

Without cost or obligation, please send me the Acousti-Celotex Sound Conditioning Survey Chart and your booklet, "Sound Conditioning for Schools and Colleges."

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Address _____

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What's New ...

Modern Design in Skyline Institutional Silver

An attractive new modern pattern is offered in Oncida institutional table



flatware. The distinctive new pattern is available in all basic pieces including teaspoon, fork, hollow handle knife, dessert spoon, table spoon, iced tea

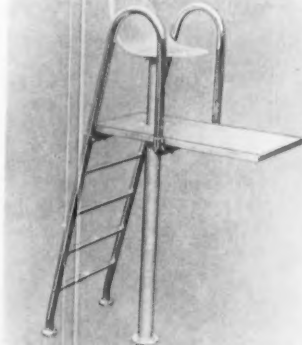
spoon, bouillon spoon, butter spreader, salad fork and solid handle knife. A new item in the line is the bread and butter knife with round end and straight blade.

The new silver is manufactured to rigid standards with a heavy gauge base metal with overall Balanced Plating and scientific reinforcements of a second extra plate of pure silver on points of greatest wear in spoons and forks. The knife blade has a serrated cutting edge which stays sharp, and smooth lines for easier cleaning. **Hotel and Restaurant Div., Oncida Ltd., Oncida, N.Y.**

For more details circle #29 on mailing card.

Guard Chair Tower for Swimming Pool

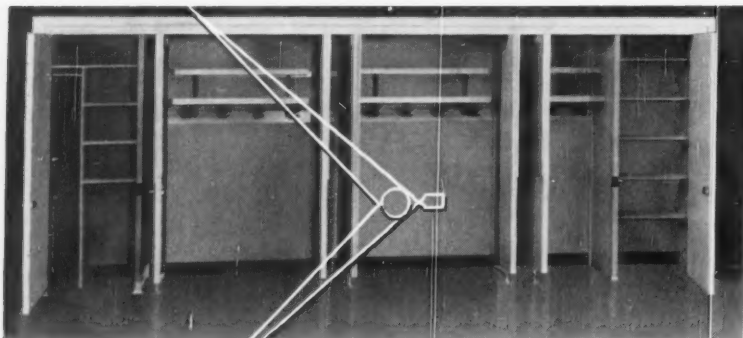
Advanced features are used in the new guard or supervisor chair towers devel-



oped by Swimquip. Three-inch tubular steel is used for the three-point mounting and the two hand rails are of highly polished chrome plated brass. The contour seat is of molded Fiberglas and is resistant to sun, water and general abuse. The platform surface is Sure-Tread and the overall height of the chair tower is seven feet, one inch. **Swimquip, Inc., 3301 Gilman Rd., El Monte, Calif.**

For more details circle #30 on mailing card.

when you plan classroom wardrobes remember



the extra dimensions of quality in



Emco has extra "dimensions" that make it the outstanding wardrobe in the classroom field

Quality appearance is the first thing you notice in an EMCO Wardrobe. But there are more extra "dimensions" to EMCO than its good looks.

EMCO is designed to serve the needs of teacher and children in every conceivable way. The receding doors are safe ... easy to operate by the smallest child ... there are no dangerous overhead weights ... doors latch open without pinching hands ... there are no obstacles in the recess.

Next, consider EMCO's hook arrangement. It encourages neat garment storage and combined with EMCO interior venting allows for proper ventilation of wraps.

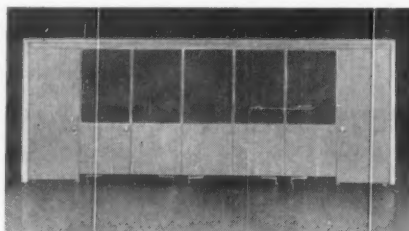
Finally, EMCO's guaranteed installation by factory trained men is the one measure of quality no other wardrobe dares to match.

So remember the Extra Dimensions — Specify — then insist on EMCO.

FREE Brochure. Send us your name and address. We'll mail you our catalog and name of nearest EMCO representative. No obligation, of course.

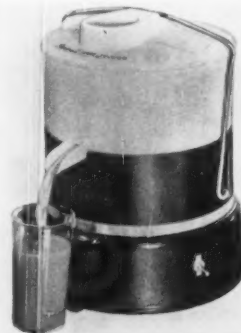
EQUIPMENT Manufacturing Co., Inc.

1400 Spruce Street
Dept. NS, Kansas City, Missouri



Fruit Juicer Has Simplified Operation

Simplified operation, cleaning and service have been built into the new Sweden Speed Juicer. Juicer cover and automatic feed are combined in a one-piece molded unit. Pulp is distributed evenly in the extractor to obtain the highest juice extraction. Pressure of the fruit or vegetable against the stainless steel cutter is controlled for minimum



bruising, thus retarding fermentation and retaining maximum minerals and vitamins with natural flavor. Feeding is automatic and an improved safety switch control is incorporated into the machine. Easy accessibility to the motor and switch mechanisms when needed is provided by the new motor suspension system. The juicer is finished in black and white. **Sweden Speed Juicer Corp., 3401 17th Ave. W., Seattle 99, Wash.**

For more details circle #31 on mailing card.

(Continued on page 204)

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in the primary grades
with . . .



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by Julie Hay and Charles E. Wingo

This widely used text presents in one book a complete program for grades 1, 2, and 3 in the study, use, and understanding of the 44 most frequently used phonetic elements in the English language. A newly-expanded set of 36 full-color Phonetic Picture Cards, illustrating each of the elements, is now available. Teacher's Edition, Pupil's Edition Seatwork.

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★ ★ ★ ★ ★ ★ ★ ★ ★ ★

DETTRA FLAG COMPANY, INC.

Dept. N, Oaks, Pa.

(Within sight of Valley Forge)

the ultimate in CENTRAL CONTROL ALL-FACILITY SCHOOL SOUND



MODEL S260

Rauland

Dual-Channel All-Program System PLUS Intercommunication

Now, you can have the most *complete* program, distribution and operational facilities ever designed in a School Sound System. The RAULAND S260 Console, with facilities for up to 160 classrooms, simplifies administrative control, provides the most versatile distribution of microphone, radio, phonograph and recorder programs to enhance instruction, and offers simultaneous 2-way communication between any classroom and central control Console. Here, truly, is the ultimate in School Sound.

- 1 **FM-AM RADIOS:** Two (2) supplied. Selects for distribution to any or all rooms, any radio program on the complete FM band or the entire AM standard Broadcast Band.
- 2 **PROGRAM PANELS:** Two (2) supplied—selects any two of 6 microphones and mixes them as desired, or mixes one microphone with Radio, Room-Return or any one of 4 programs—Transcription Phono, Record Changer, Tape Recorder or Remote Line.
- 3 **MASTER CONTROL PANEL:** Provides 2-way conversation with any room. Includes one-operation Emergency Switch placing Console microphone instantly in contact with any or all room speakers. Also includes for 2 automatic Program Clock and Monitor Speaker controls.
- 4 **SWITCH PANEL:** Selects any or all rooms (available with up to 160 room capacity) for program distribution. Switches provide distribution for 2 programs, for intercommunication and for room-return.
- 5 **TRANSCRIPTION PLAYER:** Plays records of all sizes and speeds, including 16" transcriptions. Record Changer and/or Tape Recorder may also be used with facilities to distribute all three programs.

WRITE FOR FULL DETAILS

RAULAND-BORG CORPORATION

Rauland-Borg Corporation
3515-N West Addison St., Chicago 18, Ill.

Send full details on RAULAND School Sound Systems. We have
... classrooms; auditorium seats.

Name Title

School

Address

City Zone State

What's New ...

Typewriter Desk in Three Styles

Three styles, each in two sizes, are available in the new Combination Typewriter Commercial Desk. Sizes include 18 inches deep by 36 inches wide or 18 inches deep by 48 inches wide. All desks have non-warp Fibresin solid plastic tops $\frac{3}{8}$ inch thick. Frame work is of $1\frac{1}{8}$ inch square steel tubing, welded in one piece. All metal parts are finished in light tan DuPont baked enamel.

The styles include the #100 desk with the typewriter section adjustable in height at three fixed positions—25, 27

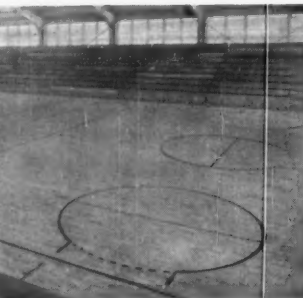


and 29 inches. The #200 is adjustable to any height from 25 $\frac{1}{2}$ to 29 inches by means of a simple removable mechanism operated by a recessed crank at the side. A one piece non-adjustable Fibresin flush top with full length book box with a partition in the center is offered in the #300 desk. All desks handle any manual or electric typewriter. Smith System Mfg. Co., 212 Ontario St. S. E., Minneapolis 14, Minn.

For more details circle #32 on mailing card.

They love us in Pensacola

Tate High School Gymnasium
Pensacola, Fla., designed by Frank A.
Sindelar, architect, Pensacola, Fla.
Ironbound Continuous Strip Maple Floor
installed by E. P. Cuthrell Flooring
Co., Birmingham, Ala.



Gymnasium of Pensacola High School,
Pensacola, Fla., designed by Max J.
Heinberg, Jr., architect, Pensacola, Fla.
Ironbound Continuous Strip Maple
Floor installed by E. P. Cuthrell
Flooring Co., Birmingham, Ala.

Two new high schools choose ROBBINS MAPLE FLOORING

No, we don't know a soul on the Pensacola school board. It just happened that both new high schools in the city wanted the finest gymnasium floors they could get. So they chose Robbins Ironbound* Continuous Strip* Maple Floors. It's as simple as that. They wanted floors with uniform resiliency plus the assurance of smooth, beautiful appearance for generations to come. And that's what they got.

Talk to your nearest Robbins contractor if you're building or remodeling your school. Write for his name to: Robbins Flooring Company, Reed City, Michigan.



ROBBINS FLOORING COMPANY

WORLD'S LARGEST MAPLE FLOORING MANUFACTURER

Reed City, Michigan

Ishpeming, Michigan

*T.M. Reg. U.S. Pat. Off.

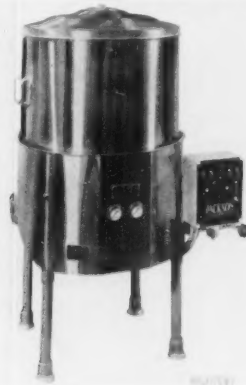
Longer Wheelbases on Schoolmaster Buses

Wheelbase lengths of International 54, 60 and 66 passenger Schoolmaster bus chassis are increased 12 to 16 inches to accommodate 23 $\frac{1}{2}$, 26 and 28 foot bus bodies as recommended by the National Education Association. Also available as standard equipment on the new school buses at no extra cost is the chrome yellow paint required by law in many states. International Harvester Co., Motor Truck Div., 180 N. Michigan Ave., Chicago 1.

For more details circle #33 on mailing card.

Single Unit Dishwasher Combines Speed and Volume

For institutions serving 100 to 250 persons per hour, the new Jackson 50-APR stainless steel dishwashing machine will wash and rinse 1400 dishes



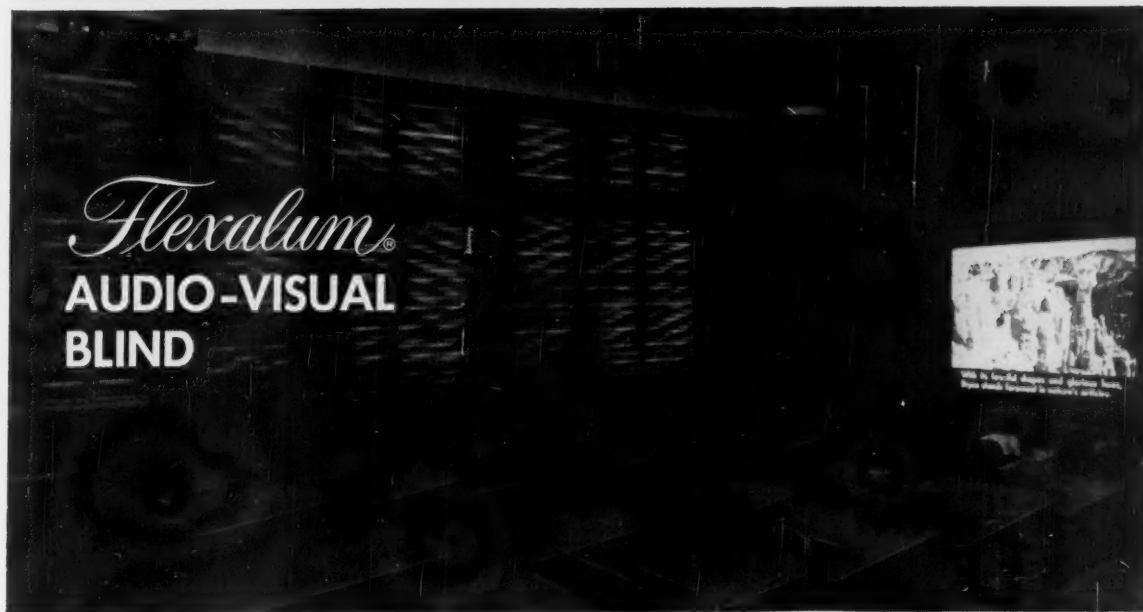
per hour. Thorough wash-rinse is accomplished by 20 rotating wash jets and 26 rotating rinse jets positioned above and below the rack during a one minute wash and 10 second rinse cycle.

The unit features an all new power rinse unit which operates normally and efficiently on as little as five pounds outside water pressure. The unit stands 57 inches when used with a 34 inch high work table and has a base diameter of 26 $\frac{1}{2}$ inches. Two dish racks and one combination glass and silver rack are standard equipment. Jackson Products Co., 3703 E. 93rd St., Cleveland 5, Ohio.

For more details circle #34 on mailing card.

(Continued on page 206)

New *Flexalum*® Audio-Visual blind keeps out 30 times more daylight!



Field tests just completed by a leading independent testing laboratory* show that the new Flexalum Audio-Visual Blind keeps out 30 times more daylight than a fully-closed conventional blind. With the flick of a cord, it turned a sunny classroom into a dark auditorium—easily meeting the requirements of

the Illumination Engineers Society for motion picture theaters! (Even with an opaque-type projector, the image was reported "clear, sharp, with good color"). Here, at last, is the blind that meets your daily classroom needs for audio-visual instruction at a moment's notice.

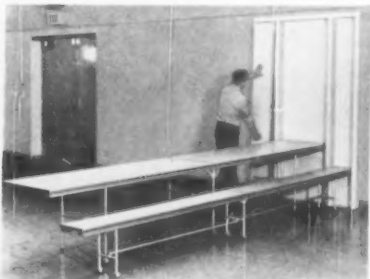
*Complete 20-page report of tests conducted by U. S. Testing Company sent on request. Write to: Hunter Douglas Corp., Dept. D-9, 150 Broadway, New York 38, N. Y. (In Canada: Hunter Douglas Ltd., Dept. DC-9, 9500 St. Lawrence Blvd., Montreal, Que.)



What's New ...

Table and Bench Set Has Self-Supporting Frame

The steel frame or under-carriage of the new Wall-Fol Folding Table and



Bench Set is self-supporting and self-standing. The cadmium plated tubular steel legs are attached to the steel frame members for strength and solidity and the plywood top is fastened to the unit frame. Tops are surfaced with plastic laminate in a wide variety of colors and patterns. They are attractive in appearance, can be blended with room colors, and are easy to clean and maintain.

The table and bench sets for use in multi-purpose rooms and social halls roll and fold easily in and out of the steel wall cabinets. Eight different cabinet models are offered for flexibility of installation. Storage cabinets may be installed in wall recesses or attached to

wall surfaces, and require a minimum amount of space. Six different table and bench heights are offered to handle requirements for all ages. The tables and benches may be easily detached from the cabinets and are readily rolled to any desired location for individual use. The new unit is designed for maximum strength and to save time and labor in flexible and multi-purpose rooms. **Rol-Fol Table, Inc., 8467 Melrose Place, Los Angeles 46, Calif.**

For more details circle #35 on mailing card.

Increased Light in Redesigned Fluorescent Lamp

Double the light output of tubes of equal length is claimed for the new General Electric Fluorescent lamp. A revolutionary change in tube design is responsible for the improvement. It features a series of lengthwise dents or grooves along one side of the eight foot tube. The greater light output is said to result from an increase in area of the lighted tube surface, the higher wattage at which the new tube can be operated, and the more effective use of energy within the tube. Known as Power-Groove, the new lamps achieve the gain in light output with no loss in efficiency. **General Electric Company, Nela Park, Cleveland 12, Ohio.**

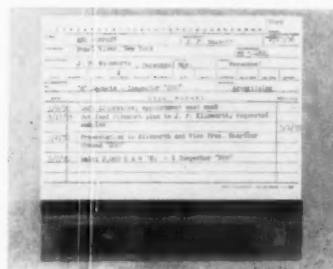
For more details circle #36 on mailing card.

(Continued on page 208)

Microfilm System for Existing Records

Filmsort Transtrip is a new technique for using microfilm with existing records. A clear acetate jacket known as the Filmsort Transtrip is combined with individual pockets or chambers for 16 mm or 35 mm film with a special adhesive strip for attaching to file folders or cards in existing systems. Lengths are optional, facilitating the use of Transtrip jackets with any records.

The new system was developed for use where there is a high rate of referrals. A quantity of information can be added to existing records without increasing



their bulk. Filmsort readers or Filmsort Micro Midget can be used to view individual films without removal from the jacket. **Filmsort Div., Dexter Folder Co., 30 S. Pearl St., Pearl River, N.Y.**

For more details circle #37 on mailing card.



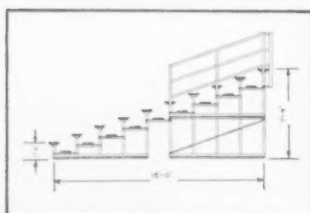
**ECONOMICAL
SAFE SEATING**

*for any size
audience*

**AMERICAN-UNIVERSAL
GALVANIZED
BLEACHERS**

*"Package
Units"
at low cost*

Engineered to national standards; provide exact number of seat-rows for present needs—economically expanded in depth and section for future plans. Prefabricated structural steel members *Galvanized for thorough protection against rust and corrosion—at no extra cost.*



These bleachers are designed for permanent, semi-permanent, or temporary seating at all types of indoor or outdoor events.

**UNIVERSAL
MANUFACTURING CORP.**

Write for New Bulletin
ZELIENOPLE 7, PA.

Accepted Procedure ...

against
**Athlete's
foot**
with modern
DOLGE Fungicides

DUSTING Alta-Co Foot Powder on the feet and inside shoes

FOOT BATH Alta-Co Powder dissolved in water for group prophylaxis

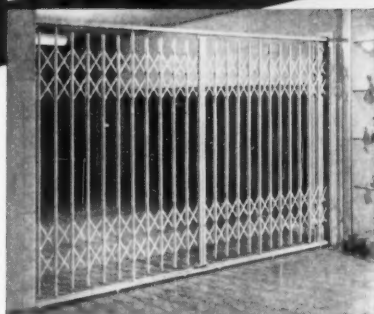
FLOOR WASH H.D. Fungicide diluted in 300 parts water—mop on floor

Write for Booklet
on Athlete's Foot Control

DOLGE
WESTPORT, CONNECTICUT

Day and Night, More Schools Rely On...

Acorn folding gates



(Illustrated above) Acorn "in-a-wall" folding gate unit. Diagram shows half of unit compactly folded into wall cabinet.

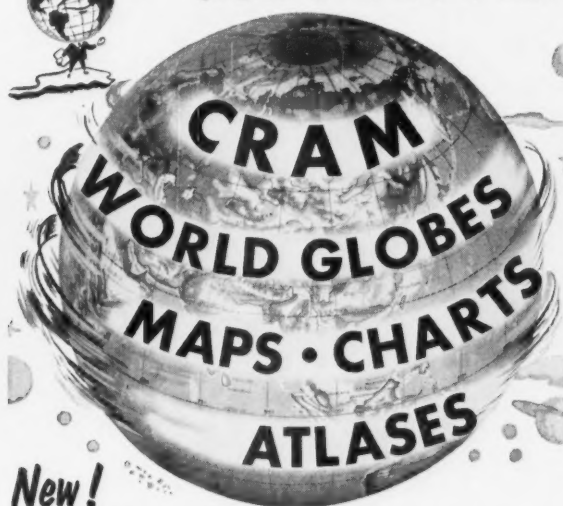
Impersonal, architecturally correct, ACORN "in-a-wall" Folding Gates keep evening crowds neatly channeled into auditorium or gymnasium, away from unused classrooms. The evening over-gates fold into small flush cabinets. No fuss, no bother! Complete, dignified security! An ACORN gate for any requirement. See Sweet's Architectural File, or write for new catalog TODAY.

Acorn Wire and Iron Works

4940 South Kilbourn Avenue, Chicago 32, Illinois



NOW is the time to order



New!

Visual Aids for the Teaching Profession

Universally accepted as the teacher's favorite. Graded to fit the pupils' mental maturity. MARK-ON RUB-OFF surface. Many other exclusive features. Backed by over 89 years editorial experience.

Save money—Let a Cram man call and survey your equipment and help you plan a buying program for your school. Send for Cat. 88-B.



THE GEORGE F. CRAM COMPANY, INC.
230 EAST WASHINGTON STREET • INDIANAPOLIS 7, INDIANA



Don't "Traffic Jam"

washrooms with
SLOW dispensing
paper towels



Straubel

INTERFOLD TOWELS DELIVER
AS "FAST-AS-THE-HAND"
— NO WAITING — NO WASTE
NO PROBLEM KEEPING
CABINETS FILLED

Straubel TEXTURIZED towels fit all standard cabinets but you'll fill our No. 82-2 cabinet less frequently because it holds two 250 towel packages.



Straubel TEXTURIZED towels come in Singlefold, Multifold, Narrowfold and C-fold sizes—Bleached White and Brown grades. We invite you to "test try" them and compare!

Keeping washroom traffic on the move and reducing classroom tardiness is an easy problem to solve with Straubel TEXTURIZED towels. They dispense easily and singly and only ONE of these soft, absorbent fast drying towels is needed to thoroughly dry both hands! You save plenty, too, because they discourage childish pranks which often result in costly, wasteful streamers of unused toweling. TEXTURIZED towels are neater too, because they're wet strength treated and do not easily disintegrate or shred—leave tell-tale fuzz or lint. Write for samples—we make towels to fit any budget.

TISSUES THAT SAVE IN YOUR WASHROOMS, TOO!

Straubel's exclusive "Convenience Cut" roll tissues dispense but two sheets at a time... Stop costly roll spinning, eliminate unsightly, wasteful unused tissue streamers. Sanitary, soft, absorbent Natural or Bleached White tissues in 1500 or 2000 sheet rolls — Also, interfolded packs for recess or cabinet dispensers.



Sold only through reliable Distributors of paper products. Write for dealer's name; best located to serve you.

STRAUBEL PAPER CO. • GREEN BAY • WIS.

What's New ...

BUTLER'S target: Finest factory-built steel building in U. S. A.



Combination of low-cost, factory-fabricated Butler metal building with traditional brick front creates this attractive gymnasium.

... but step into a
BUTLER building
and see
for yourself

Time was when metal buildings were used as sheds—relegated to industry's back yard. It wasn't the material's fault, but the way it was "designed" and built. Butler changed all that. You'll see Butler buildings used as schools, gymnasiums, recreation centers, laboratories and offices. Reason? Butler frame construction eliminates supporting columns—gives you free use of inside space. Exterior cover is all die-formed and factory finished—then bolt-assembled. That gives you quick erection, "front-yard" looks, and a time-defying weather barrier. All this and more at a dramatically low cost. But step into a Butler building and see for yourself. Mail coupon today for full information.



Manufacturers of Oil Equipment
Steel Buildings • Farm Equipment
Dry Cleaners Equipment • Special Products

Factories at:
Kansas City, Mo. • Galesburg, Ill. • Minneapolis, Minn.
Richmond, Calif. • Birmingham, Ala. • Houston, Texas

For prompt reply address office nearest you.

BUTLER MANUFACTURING COMPANY
7318 East 13th Street, Kansas City 26, Mo.
918A Sixth Avenue, S.E., Minneapolis, Minn.
1018 Avenue W, Ensley, Birmingham, Ala.
Dept. 18A, Richmond, Calif.

Please mail me more information on Butler steel buildings.

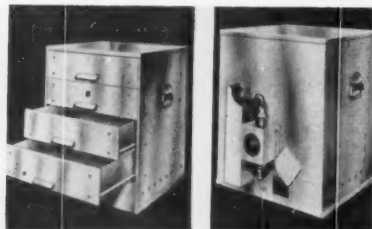
Name _____

Address _____

City _____ State _____

Heated Food Carrier Cabinets Carry Their Own Fuel

Model H-331-G is a portable propane heated food carrier cabinet of the self-contained drawer type. It is heated



evenly and thoroughly by a fixed burner with a controllable flame. The fuel supply of LP gas is carried as a part of the unit and one bottle lasts from 12 to 18 hours of continuous operation. The Cres-Cor "Hot Stuff" portable cabinets are designed for carrying food from central kitchens to cafeterias, teachers' lunch-rooms and other eating rooms. Food is transported and served hot, with no pre-heating or reheating.

Hot food is arranged in drawers in the cabinets, ready for serving. Safety stops on the drawers prevent their being accidentally pulled out. The mobile cabinets are especially useful where food must be transported between buildings as they are designed to fit and stack into a panel type truck. Crescent Metal Products, Inc., 18901 St. Clair Ave., Cleveland 10, Ohio.

For more details circle #38 on mailing card.

Institutional Electric Range in Low-Cost Unit

The Economizer II is a new low-cost electric range designed for institutional use. It has two full sized, heavily in-

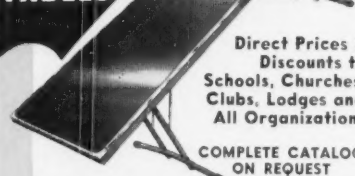


sulated ovens, each having automatic heat controls which allow preheating to 400 degrees F. in nine minutes. Four six inch and four eight inch high speed heating units are staggered on the one-piece stainless steel top. The stove is of heavy duty construction with ham-mertone finish and operates economically. It stands on six inch legs to conform to sanitary codes. Griswold Mfg. Co., Erie, Pa.

For more details circle #39 on mailing card.

(Continued on page 210)

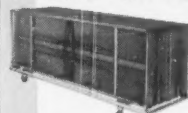
monroe FOLDING BANQUET TABLES



Direct Prices &
Discounts to
Schools, Churches,
Clubs, Lodges and
All Organizations

COMPLETE CATALOG
ON REQUEST

TRUCKS FOR FOLDING TABLES



Monroe TS (transport - storage) Trucks make handling and storing of Folding Tables easy and quick. Combination offers.

STEEL FOLDING CHAIRS



Monroe Steel Folding Chairs in attractive range of styles, sizes and prices. Excel in comfort, easy handling and durability. Also full line of non-folding chairs, desks and combinations for classroom, cafeteria and church school use.

PORTABLE PARTITIONS



Monroe's new movable partitions change idle space into useful areas. Smooth Masonite panels, tubular steel frames, Swivel pedestals, casters or glides.

THE Monroe COMPANY
76 Church St. Calfax, Iowa

Burke

BETTER BUILT EQUIPMENT

... for
PLAYGROUND, RECREATION, SPORTS
... tops in
Quality • Safety • Service

- Heavy-duty Playground Equipment ... and Park Benches • Picnic Tables • Portable Prefabricated All-Steel Platforms and Bleachers • Bicycle Racks • Offset Basketball Backstops ... and other recreational and sports equipment.

Use the Burke personalized planning and advisory service at no cost or obligation. Write for complete information about products and name of nearest dealer.

THE J. E. BURKE COMPANY
NEW BRUNSWICK • N. J.
FOND du LAC • WIS.

For ageless beauty and service—build with NATCO CERAMIC GLAZE VITRITILE

Interior views of Divine Saviour High School, Milwaukee, Wisconsin. 6T series Natco ceramic glaze Vitritle in green mottle and dark green trim used.

Architect—E. Breilmaier & Sons,
Milwaukee, Wisconsin
Contractor—Hunzinger Construction
Company, Butler, Wisconsin



Today's most versatile wall material for schools is Natco structural ceramic glaze Vitritle. It builds a strong, load-bearing wall or partition with an attractive interior finish in a single operation.

Other features that help to make Natco Vitritle the preferred facing material among discriminating school boards and committees are:

- fire safety
- vandalism resistant
- engineered permanent colors
- complete sanitation
- easy soap and water maintenance

Made in modular dimensions in three different size series, including various shapes and fittings, Natco ceramic glaze Vitritle is easy to place with low material waste, which means fast erection without time-wasting, costly delays. And by the test of years it proves lowest in cost.

There's a place in your school plans for Natco ceramic glaze Vitritle. It will pay you to investigate its opportunities and advantages. We will be pleased to furnish a list of Natco school installations—some ranging up to 30 years of service. For detailed information on Vitritle, write for bulletins: 8W-455; 6T-1155; 4D-1255.



NATCO CORPORATION



327 Fifth Avenue, Pittsburgh 22, Pennsylvania

District Sales Offices

Boston 16, Mass., 20 Providence Street, Tel. Hubbard 2-3549—2-3556
Chicago 6, Ill., 205 West Wacker Drive, Tel. Franklin 2-5754
Detroit 2, Mich., 2842 West Grand Boulevard, Tel. Trinity 3-0310
New York 17, N.Y., 205-17 East 42nd Street, Tel. Murray Hill 4-1922

North Birmingham 7, Ala., P.O. Box 5476, Tel. Birmingham 4-1881
Philadelphia 2, Pa., 1518 Walnut Street, Tel. Pennypacker 5-5112
Pittsburgh 22, Pa., 327 Fifth Avenue, Tel. Grant 1-9370
Syracuse 10, N.Y., 225 Kensington Place, Tel. Syracuse 76-1569

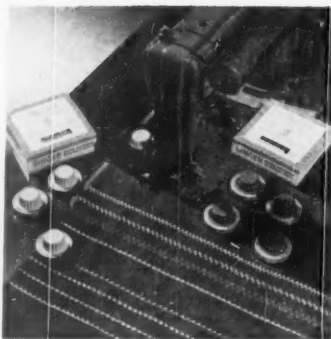
In Canada: Natco Clay Products Limited, 57 Bloor Street, West, Toronto 5, Ontario

What's New ...

Eight Stitch Patterns for Automatic Zigzagger

The addition of eight new Stitch Patterns brings the total to 16 different decorative stitch patterns which may be accomplished by the Singer Automatic Zigzagger.

In one group identified by blue-topped cams are the Key Stitch, the Ball Stitch, the Block Stitch and the Shingle Stitch. Known by yellow-topped cams, the second group includes the Curved Mending Stitch, the Open Scallop Stitch, the Three Step Stitch and the Solid Scallop Stitch. Stitch patterns may be purchased



individually or in sets of four. Singer Sewing Machine Co., Inc., 149 Broadway, New York 6.

For more details circle #40 on mailing card.

Liquid Detergent for Hand Cleaning

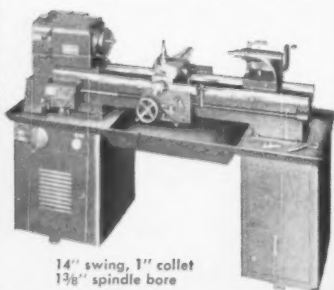
Poly-Wet is the name of a new type of liquid detergent formulated for all general hand cleaning operations. The new concentrated liquid wetting agent detergent is the result of extensive laboratory and field research and is said to be exceptionally effective in hard water areas. It eliminates hard water scum when cleaning fatty or greasy equipment and leaves no film, streaks or spots because of its clean and fast rinsing.

Efficient penetrating and emulsifying properties as well as foam stability are other features of Poly-Wet which may be combined with other acid or alkaline detergents for heavy soil or lime removal. It is non-corrosive, kind to hands and leaves equipment bright and clean.

Klenzade Products, Inc., Beloit, Wis.
For more details circle #41 on mailing card.

Logan

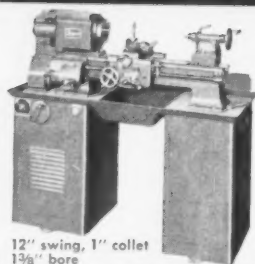
LATHES GIVE THE STUDENT INDUSTRIAL TOOL EXPERIENCE



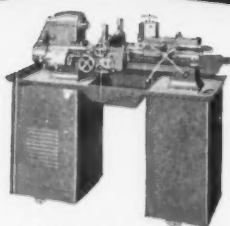
14" swing, 1" collet
1 3/8" spindle bore

The school shop equipped with Logan Lathes gives its students the big advantage of learning on an actual industrial tool. Logan sustained accuracy and versatility permits a broad range of industrial type projects for advanced classes. Logan safe-operation features and rugged construction are of special value with novice groups. No other lathes of comparable specifications match these Logans for economy.

Screw Cutting and Turret Lathes
In a Wide Range of Sizes
9", 10", 11", 12" and 14" swing, all with Logan advanced design features.



12" swing, 1" collet
1 3/8" bore



11" swing, 1" collet
1 3/8" bore



10" swing, 1/2" collet
25/32" bore



9" swing, 1/2" collet
25/32" bore

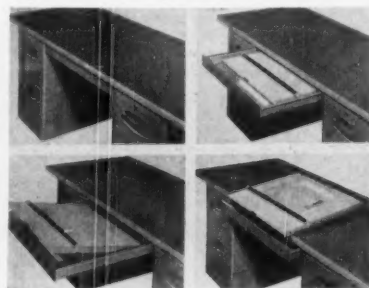
See your Logan dealer,
or write for
catalog information.

LOGAN ENGINEERING CO.

4901 West Lawrence Avenue, Chicago 30, Illinois

Folding Drawing Board Saves Space

The new Arnot Foldaway Drawing Board permits the use of art and drafting classrooms by classes for other sub-



jects. Pupils and teachers can use the new drawing boards and fold them away into a drawer at a moment's notice, leaving desks free for other uses.

The Foldaway unit consists of a complete drawer, drawing board and parallel rule and can be easily bolted or screwed to any conventional desk or table top. When folded away the drawing board is completely out of sight and the whole unit appears as a conventional center drawer, leaving the top completely clear. Self-contained suspension fixtures equipped with nylon roller tracks assure smooth gliding of the drawer. The drawing board itself is attached to the drawer by specially-designed hinges and moves easily into position on the desk top at a comfortable working slope. The Foldaway Drawing Board is available in two sizes and in three colors. Arnot-Jamestown, 730 Fifth Ave., New York 19.

For more details circle #42 on mailing card.

(Continued on page 212)



CAREFUL BUYERS

choose

Hampden



**TODAY'S BEST
BUY IN STURDY,
FOLDING CHAIRS!**

No. 73

Why? First, cost . . .
second, strength . . .
third, design. Hamp-
den's first on all three counts! Write for a
sample chair, inspect it, test it, no obligation.

This is Hampden's No. 73. Steel frame,
contoured plywood seat, baked-on enamel is
chip resistant. Rubber feet.



Hampden

SPECIALTY PRODUCTS, INC.
EASTHAMPTON - MASSACHUSETTS

Write Dept. 7-A

for illustrated cata-
log, prices and
name of local dealer.

SEE THE SCORE **BETTER** WITH A *Naden* **ELECTRIC SCOREBOARD**

Here's the latest Naden football score-
board, N-400-IV, with 24" Instant-Vue
numerals, easily readable, day or night,
from any seat in the stadium.

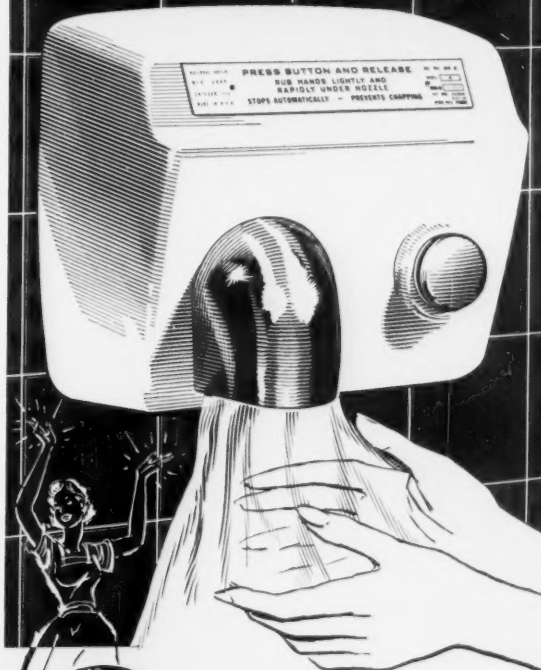
Write for Catalog
No. 1N—Basketball;
No. 2N—Football; No.
3N—Baseball. All
Naden Football score-
boards are factory in-
stalled and fully
guaranteed. Act now
for installation this
season.



FOOTBALL

NADEN AND SONS WEBSTER CITY, IOWA

CUT COSTS!



Hand Dryers

(formerly "NATIONAL" Dryers)

dry as fast as towels—at
a fraction of the cost

It's the most widely used electric hand dryer—all over
the world. WORLD dryer fame has jumped the oceans!
Hence it's been renamed, "WORLD"... (Ask for list of
famous users.)

WORLD Hand Dryers save an average of \$600 per
year per dryer—often lots more! No more costly towels;
no more toilets clogged with discards; no more buying,
renting or storage. Instead, clean, bright washrooms—
at lowest cost!... **Install WORLD Hand Dryers!**

The Dryer Proved Best by U. S. Government Test
MAIL THIS COUPON TODAY!



WORLD DRYER CORPORATION
(Formerly "NATIONAL" Dryer)
616-22 W. Adams St., Chicago 6, Ill.

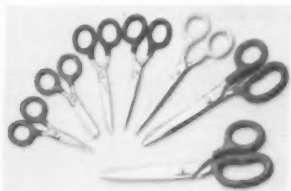
Gentlemen: Without obligation send me copies of
letters from users, also folder of facts including
cost-saving figures and full details on your FREE-TRIAL offer.

My name.....
Firm name.....
Street.....
City..... State.....

What's New ...

Colorful Scissors Have "Cushion Grip" Handles

Vinyl foam is used for the "Cushion Grip" on the handles of new scissors re-



cently introduced. More comfort and reduced chance of irritation after long use of the scissors by students and teachers is thus achieved. The new cushioned handles are available in several colors in the specially formulated vinyl coating which is unbreakable, acid proof, dirt proof and exceptionally durable. John Ahlbin & Sons, Inc., Dept. N, 188 Garden St., Bridgeport 5, Conn.

For more details circle #43 on mailing card.

Steel Curtain Wall Panels in Several Styles

Several styles and weights of steel curtain wall panels are now available either insulated or non-insulated. They are easily applied by means of metal clips fastened by a hand-operated clinching tool, eliminating the need for welding.

The new curtain wall panels have "Stran-Satin" finish, a zinc coating process recently developed which combines attractiveness with the time-proven qualities of zinc coating. Metal thicknesses of the walls have been standardized at 18, 20 or 24 gauge.

Another new Stran-Steel product is the 10 and 12 inch joists. While still retaining the nailable feature, the new joists can be used for spans up to 30-feet, making possible the application of these members to a broader range of building projects, including classroom modules for one-story schools. The constant depth of the joists facilitates a simple cantilever detail for overhand. Nailability makes ceilings easily applied at low cost. Stran-Steel Corp., Ecorse, Detroit 29, Mich.

For more details circle #44 on mailing card.

Business Classroom Stands With Welded Tubular Frames

Arch-strut welded tubular steel frames are used in the new line of Hercules all-purpose business classroom stands, student typing tables and instructor tables. They are constructed to resist vibration when used for modern typewriters and business machines and the U-bar bracing prevents leg wobble while affording generous chair and leg room. Frames are

(Continued on page 214)

finished in baked wrinkle enamel and the Vibrex tops are non-glare. The units are available in school beige, gray, black or green.

The Hercules Business Classroom Table is available for either right or left hand mounting of the typewriter or business machine. Student typing tables are offered in three heights, all with adjustable legs. The instructor tables are also offered in three heights to eliminate

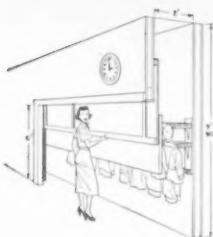
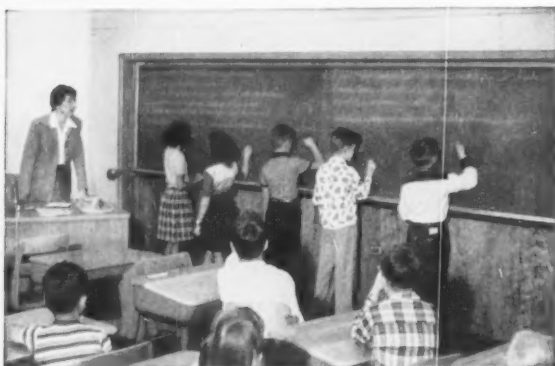


the strain of bending or stooping. The units have heavy duty screw-jack glides on each of the legs. Meilink Steel Safe Co., Oakwood & Dawson Aves., Toledo 5, Ohio.

For more details circle #45 on mailing card.



Barcol. WARDROBEdoor



WARDROBE BEHIND CHALKBOARD is reached by easy upward movement of 2-section Barcol WARDROBEdoor. Full-view opening gives teacher control of "cloak-room rush." Provides more working wall space for chalkboard or tackboard, more usable floor space clear of pivots and hinges. Advertised to school officials. Call your Barcol distributor...under "Doors" in phone book.

Barber-Colman Company

DEPT. N869, ROCKFORD, ILL.

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Now! Choose From Three Tables



GEM PEDESTAL TABLE

Three tables with price appeal. Any one may fit into your requirement and your budget. Let us quote on your needs.



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C7703B DRAFTING TABLE

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Dishes wash by the basketful in turbulent 120° to 160° wash water... are quickly, comfortably lifted to adjoining tub to rinse in a flow of 180° water that positively kills surviving pathogenic bacteria.

Plates, cups, glasses, silverware, pots and pans are washed, sanitized and air-dried at the rate of 2000 per hour. You save wages, dish breakage, soap and hot water.



NEW 3-TUB KEWANEE

provides extra full-size tub, plus additional shallow compartment for gross soil, with special waste and drain. \$684, F.O.B. Kewanee, Ill. (subject to change without notice).

MAIL THIS COUPON NOW!

Kewanee Dishwasher
902 Burlington Ave.
Kewanee, Illinois

Rush facts on 2 tub, 3-tub and Pre-Wash Kewanee Dishwashers at no cost or obligation.

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Establishment _____

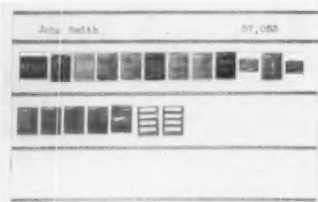
Street _____

City _____ State _____

What's New ...

Micro-Jackets Facilitate Record Filing

The filing of microfilmed records of students can be simplified by the use of a new service known as Micro-Jackets. The



microfilm record for each student can be filed on a single ready reference card in ordinary filing equipment. Space saving is combined with the simplicity of a card system with the new method. Unit filing and quick reference are facilitated with the full student record immediately available on one card.

Four types are offered in Atlantic Micro-Jackets: Type 1 with highest film capacity per jacket, is made of optically clear acetate bonded by colored narrow ribbing, in five standard sizes for 16 and 35 mm film; Type 2 with flat colored ribbing bands for 16 mm film is easy to handle and film is easily inserted; Type 3 with special openings at the top of each film changer, particularly suitable for short strips or single images is available in four sizes for 16 mm film, and Type 4, with extra thin ribbing to stack 40 to the inch, is designed for use where space is at a premium. Jackets are available for 16, 35 and 70 mm film in all standard card sizes. Atlantic Microfilm Corp., 41 Union Square W., New York 3.

For more details circle #46 on mailing card.

Jet Disposer for Food Waste

The principle of breaking up, pulverizing and liquefying food waste of all kinds is used in the improved FMC Jet Disposer. The liquefied waste, including bones and corn cobs, is discharged directly into the sewer line. Sorting and carting food waste is not necessary with the new equipment which is designed to prevent jamming.

Large pieces of waste are first broken up in the Disposer by the turn breaking heads. The smaller sized particles enter the grinding rings through centrifugal force and the continuous cutting action reduces them to pulverized waste which is liquefied by the addition of water for discharge into the sewer line. The new model is designed for installation under the soiled dish table or in other convenient locations. A silver trap protects against damage to and loss of silverware. Food Machinery and Chemical Corp., Kitchen Equipment Dept., Hoopeston, Ill.

For more details circle #47 on mailing card.
(Continued on page 216)

tops in class

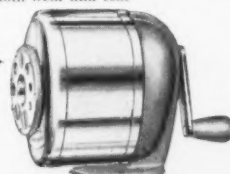
BOSTON KS

efficient—30 hard-steel, deep-milled cutting edges cut swiftly and neatly—BOSTON pencil stop prevents waste

rugged—strong, die-cast frame and steel rack—nickel-plated steel receptacle

adaptable—snap guide takes 8 pencil sizes

dependable—guaranteed 1 year—even against classroom wear and tear



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School report book on pencil sharpener care, selection and use in schools.

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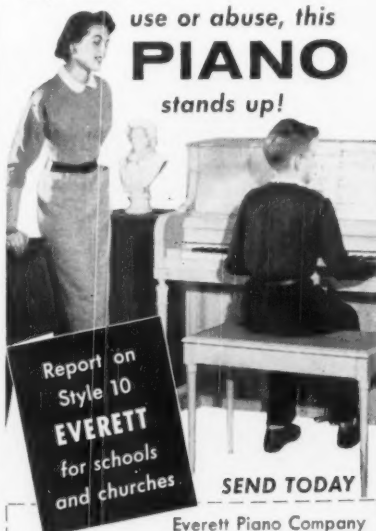
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The beautiful Style 10 Everett is designed for long, trouble-free service. Full-cast plate, double veneered case, full-size action. Unexcelled tone provided by 44-inch height. Cost is amazingly low. Mail coupon for factual book and list of hundreds of prominent users.

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SEND TODAY

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South Haven 6, Michigan

Please send free copy of "Report 10."

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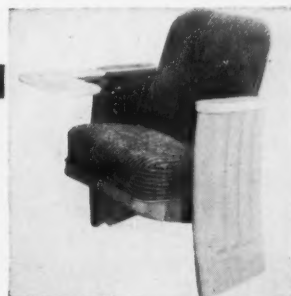
CITY _____ STATE _____



Griggs Model 50 MBW fully-upholstered Auditorium Chair

Meets Every Requirement for fine auditorium seating

Comfort... beauty... durability—the three items you must consider when buying your auditorium seating. Look to Griggs—a chair in their large seating line meets the need for your school. And you'll get lots of extras with every Griggs chair—"Push-Back" or self-rising seats, solid *steel* standards that go all the way to the floor, and the widest choice of colors and fabrics offered by any manufacturer.



All Griggs auditorium chairs can be ordered with folding, "out-of-the-way" tablet arms. Convert part of your auditorium into lecture space with these handy writing attachments.

Write today for Griggs complete catalog on school and auditorium seating. As an aid to color and material selection, please request Auditorium Seating Color Guide.

GRIGGS

Equipment, Inc.
Belton, Texas

What's New ...

Shower Head Serves Large and Small Areas

The new American-Standard institutional shower head can be adjusted to



give spray angles of 15 to 30 degrees from the wall, thus serving large shower areas or smaller separate stalls. Serrations on the face plate send the water stream in a water-conserving pattern, and the volume and velocity of water can be adjusted and locked with a tamperproof Allen head screw.

The face plate, made of black mineral-filled phenolic resin, sustains temperatures up to 180 degrees F and resists temperatures up to 220 degrees F for limited periods. The cast brass body is available with tappings for either $\frac{3}{4}$ or $\frac{1}{2}$ inch I. P. S. supply and is furnished regularly with $\frac{1}{2}$ inch tappings. The head

can be made vandalproof if necessary. American Radiator & Standard Sanitary Corp., 40 E. 40th St., New York 18.

For more details circle #48 on mailing card.

Flash Cards for Music Training

A new set of large Music Flash Cards is now available for classroom use. Readable at a distance one and one-half times the size of the average classroom, the large cards are designed to speed teaching. Music figures are photographic enlargements of actual engraved music. The cards are divided into nine lessons with the printing upside down for the teacher's quick reference while holding the card before the class. The cards have been tested and approved by school systems and include the large cards for the teacher and a set of small matching cards for pupil study. Dek-A-Music Co., Dept. N, 1102 S. 31st Ave., Bellwood, Ill.

For more details circle #49 on mailing card.

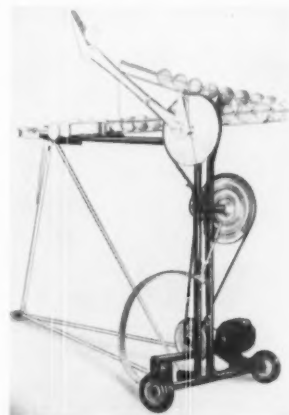
Baseball Pitching Machine in Low-Priced Unit

An automatic baseball pitching machine is now available in a low-priced unit, designed for schools, clubs and boys leagues. It will hold 30 standard baseballs and the speed of the pitch can be adjusted for all age groups. The height

(Continued on page 218)

of delivery at the plate is also adjustable. Operated by a $\frac{1}{4}$ h.p. motor, the machine can be used continuously at very low cost.

Solid rubber tired wheels make the machine readily mobile. It can be moved from one diamond to another and is collapsible for transport in car or station wagon. It can be used from standard pitching distances and will throw either a leather or a rubber covered baseball without damage to the ball. With minor



adjustments it will also throw soft balls. The Dudley Sports Co., 633 Second Ave., New York 16.

For more details circle #50 on mailing card.

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univex
VEGETABLE PEELER

MODEL G
\$150.00

**NO OTHER PEELER
AT THIS PRICE HAS
ALL THESE FEATURES**

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Saves up to \$3 per 100 lbs. over hand peeling.

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For Permanent Installation
All Stainless with adjustable legs and discharge
\$240.00



...Potatoes...Carrots
...Turnips and other
deep root Vegetables



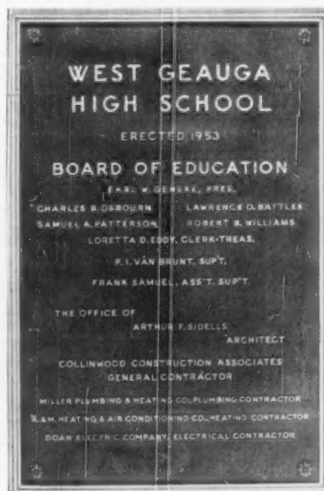
Prices Slightly Higher in West

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SOLID BRONZE DEDICATION TABLETS

SHOULD BE A "MUST" FOR EVERY PUBLIC BUILDING



MODEL No. 100 — 20" x 30"
MADE IN ANY DESIRED SIZE

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Should **your school** be run as efficiently as a modern office?

Your profession is teaching young people the skills that will help them succeed in the world of the modern office.

We of Dictaphone Corporation believe that training in Dictaphone TIME-MASTER transcription has its vital place in this curriculum.

And yet . . . are you taking advantage personally of your own teaching? Are you speeding your own communication . . . your letters, memos, reports, ideas . . . by means of the world's most accepted and trusted dictating machine, The Dictaphone TIME-MASTER?

You owe it to yourself to gain the extra time . . . relaxation . . . fluency that TIME-MASTER dictating invariably bestows.

And, we feel, you owe it to your pupils to run your office along the efficient lines they'll discover in the business world . . . along TIME-MASTER lines.

Why TIME-MASTER instead of a less well-known dictating machine? Consider these Dictaphone exclusives:

Only DICTAPHONE has the plastic DICTABELT record . . . unbreakable, mailable, filable, crystal-clear, non-erasable, visible during dictation, and most economical.

Only TIME-MASTER is so durably engineered for the hard knocks of office and travel . . . so reliable . . . so easy to operate.

Only DICTAPHONE offers such quick service by company-trained representatives nearly everywhere across the country.

Only DICTAPHONE has gained complete, world-wide acceptance . . . selling twice as many dictating machines as anyone else.

We'd be glad to tell you more about TIME-MASTER for your own use. And about Dictaphone's School-Rental-At-Cost Plan for use in your classrooms. There's a Dictaphone office near you—or write Dictaphone Corporation, Educational Division, 420 Lexington Ave., New York 17, N. Y.

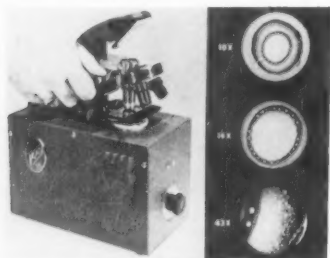
DICTAPHONE CORPORATION

DICTAPHONE, TIME-MASTER AND DICTABELT ARE REGISTERED TRADE-MARKS OF DICTAPHONE CORPORATION.

What's New ...

Microscopic Slide Projector Has Three Objective Turret

The new Victor Magnascope V200T is a microscopic slide projector with a



three objective turret. The three objectives include 10X, 16X and 43X, giving greater versatility from specimen scanning to intensely concentrated sections. The unit will project microscopic specimens on a screen for large audiences or directly down in front on table top for small groups. For screen projection the image size is controlled by the distance of the Magnascope from the screen.

The unit is compact, weighs only eight pounds and features a variable light focus, permitting adjustment of the 200 watt lamp for maximum brilliance with any objective. It is of all metal construction, finished in Sage-Green scratch resistant enamel. Victor Animatograph Corp., Davenport, Iowa.

For more details circle #51 on mailing card.

Shamrock White Expands Azphlex Tile Line

A bright new color has been added to the line of Azphlex Vinylized Tile. It is Shamrock White or P-719, a white background with colorful green marbleizing effect. It is available in nine by nine inch sizes with 3/32, 1/8 and 3/16 inch thicknesses. All Azphlex marbleized and terrazzo tone colors are now available in the above thicknesses. Azrock Products Div., Uvalde Rock Asphalt Co., 520S Frost Bank Bldg., San Antonio, Tex.

For more details circle #52 on mailing card.

Flexible Armofoam for Upholstered Seating

A new cushion foam for padding under upholstery for folding chairs, auditorium seating and similar uses, as well as padding for gymnasiums, is offered in Armofoam. A flexible polyurethane foam, all raw materials are produced within the United States.

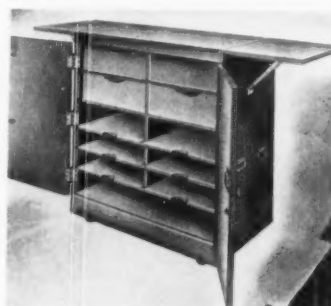
Armofoam is odorless and flame-resistant, can be washed or dry cleaned, and resists solvents, abrasion, vermin, sliding and fabric creep. It is extremely durable with strength increased by aging, and is the result of more than two years of exhaustive research and laboratory tests. Armour and Company, Alliance, Ohio.

For more details circle #53 on mailing card.

"Roll-Away" Cabinet Stores Percussion Equipment

The Wenger "Roll-Away" Percussion Cabinet not only stores equipment compactly and safely but also protects drum equipment from misuse by unauthorized players. Four top drawers hold small accessories while the four shelves are for cymbals or larger equipment. Drawers and shelves are removable for storing snare drums or other large equipment.

The cabinet is constructed of 3/4 inch fir plywood with two sets of carrying handles and four double-wheel casters for ease in carrying from place to place. A locking feature prevents loss and



makes each player responsible for his equipment. The extra large top is ideal for sorting music. Wenger Music Equipment Co., Owatonna, Minn.

For more details circle #54 on mailing card.

RINSE LINE INJECTOR

FOR MECHANICAL DISHWASHERS

KLENZADE

FLASH-DRI FEEDER

**Automatic Operation
for Feeding Flash-Dri
to Eliminate Water
Spotting**



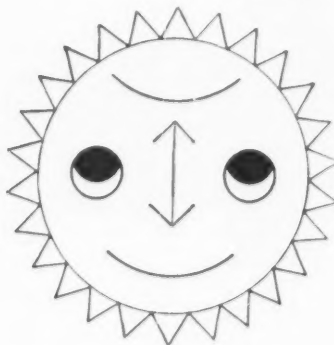
Most efficient trouble-free completely automatic injector yet designed. Feeds Klenzade Flash-Dri drying agent into final rinse line of dish machine to eliminate water spotting and provide clean film-free drying. Simple positive tube-type pump operated by pressure switch. A definite necessity in any modern food service installation, especially in hard water areas.

For Spray-Type Dish Machines

of dish machine to eliminate water spotting and provide clean film-free drying. Simple positive tube-type pump operated by pressure switch. A definite necessity in any modern food service installation, especially in hard water areas.

KLENZADE PRODUCTS, INC.
BELOIT, WISCONSIN

The tragic fact, our doctors tell us, is that every third cancer death is a needless death... twice as many could be saved.



LET'S LOOK AT THE BRIGHTER SIDE

Many thousands of Americans are cured of cancer every year. More and more people are going to their doctors *in time*... To learn how to head off cancer, call the American Cancer Society or write to "Cancer" in care of your local Post Office.

American Cancer Society



The NATION'S SCHOOLS

What's New ...

Philippine Mahogany Used in Rolling Gymstands

A new line of Rolling Gymstands is now available in red Philippine mahogany.



any. The exceptionally hard, dense wood resists splintering and surface damage, permitting the seating to retain its original usefulness after years of hard service. It also offers functional beauty with the close, fine grain and warm color which harmonizes with modern gymnasium color schemes. Wayne Iron Works, 147 N. Pembroke Ave., Wayne, Pa.

For more details circle #55 on mailing card.

Patented Screw and Washer for Leaky Faucets

The new Sexauer Monel Self-Locking Screw with expanding nylon plug imbedded in the threads is designed to lock automatically at the correct depth to hold a faucet washer firmly. When used with

the new Sexauer patented Easy-Tite faucet washers made of duPont Neoprene specially compounded to withstand extra hot water, minimum maintenance is required to keep faucets operating efficiently. The new Monel Self-Locking Screws resist corrosion, do not rust and can be easily removed when necessary. The new screws and washers are the result of years of research and experience in faucet repair and result in savings of labor, materials and water and fuel bills. J. A. Sexauer Mfg. Co., 2503 Third Ave., New York 51.

For more details circle #56 on mailing card.

Drapery Fabric Controls Sun Glare

Translucent Cloth is the name of a new fireproof drapery material designed for the control of sun glare. Normal daylight illumination is permitted when the material is used in correct fullness and ventilation and outside viewing are combined with adequate privacy. The fabric may be washed or cleaned by any method, with any soap, detergent or chemical, without stretching or shrinking. It is certified as inherently fireproof by Underwriters Laboratories, according to the manufacturer, and it is exceptionally color fast and highly resistant to fume fade. Fifty inches wide, Translu-

(Continued on page 220)

cent Cloth has excellent draping qualities, a pleasant soft feel and is available in six colors. Edwin Raphael Co., Inc., Holland, Mich.

For more details circle #57 on mailing card.

Book Display Rack Is Double-Faced

The new Model #148 Double Face Book Display is designed especially for use in libraries, schools and other institutions. Constructed of finest Northern Hard Maple, air and kiln dried, the rack is finished in either of two shades of blond. It combines attractive appearance with durability and usefulness. The manufacturer indicates that it is guar-



anteed against warping, checking, splitting or faulty workmanship for one year. Standard Wood Products Corp., Library Div., 47 W. 63rd St., New York 23.

For more details circle #58 on mailing card.

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**SPECIALISTS IN ELECTRONIC
SUPPLY FOR SCHOOLS**

Our 36th year



SUPERIOR SCHOOL FURNITURE

Construction of selected Appalachian kiln-dried Beech. Desk units with mortise and pegged tenon; chairs with spiral-grooved dowels and rigidly glued corner blocks. In Natural, Warmtone, or School Brown. Line also includes Movable Chair Desks, Tables, Tablet Arm Chairs, and Teachers Desk.

Also available with plastic surface.

Write for name of authorized distributor in your state.

WILLIAMS & BROWER, Incorporated
SILER CITY • NORTH CAROLINA

What's New ...

Wet-Dry Vacuum For Heavy Duty Cleaning

The new Model WD-6 Clarke wet-dry type vacuum cleaner is designed for heavy duty institutional use. Compact-



ness is coupled with powerful suction in the readily mobile machine which moves on four free running, ball bearing swivel rubber casters. A protective non-marking gray rubber bumper extends around the base of the machine to protect walls, doors and furniture.

A special 1/2 h.p. rubber mounted Universal constant duty, moisture proof, bypass motor delivers a water lift of 63 inches with closed orifice. The motor is thoroughly sound-proofed for quiet operation, housed in aluminum to resist rust and corrosion and is equipped with

a filter to eliminate radio reception interference. The machine has a dry capacity of 1/2 bushel and will pick up 2 1/2 gallons wet. A positive action aluminum floating shut-off device warns of capacity in wet pick-up. **The Clarke Sander Machine Co., 30 E. Clay Ave., Muskegon, Mich.**

For more details circle #59 on mailing card.

Folding Table Line Has 165 Different Tops

A choice of 165 different plastic tops is now offered in the Midwest Portable Folding Pedestal Line Tables. The color and pattern assortment makes it possible to choose tables to harmonize with any classroom, dormitory or lunch-room color plan. The tables are easy to set up and fold compactly for storage. The sturdy structural steel tubing legs have marproof glides. Welded construction is employed throughout and the Du-Honey 20 automatic leg safety lock assures positive locking in both the closed and the extended positions. The tables are available in a wide range of sizes and in heights to accommodate any age group. In addition to the 165 different plastic tops, the tables may also be had with Mid-Tex, plywood or linoleum tops. **Midwest Folding Products, Roselle, Ill.**

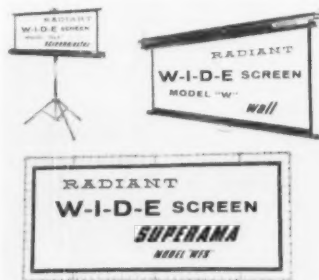
For more details circle #60 on mailing card.

(Continued on page 222)

Wide Projection Screens Available in Complete Line

Portable tripod, wall hanging and frame-type models are offered in the complete line of Radiant wide projection screens. All types are designed for highest quality reflection in all aspect ratios from the normal ratio of 1.33 to one, to a full ratio of 2.66 to one.

Tripod screens are suggested for projecting extra wide pictures in sizes up to 96 inches while wall and ceiling screens come in standard sizes from five feet. Lightweight aluminum is used for the framed screens which are easy to assemble or take down. The screen is



matte-white, glass-beaded or Superama Silver fabric, and can be used for all types of projection. **Radiant Mfg. Corp., 2627 W. Roosevelt Rd., Chicago 8.**

For more details circle #61 on mailing card.

In lessons, lectures and literature it's the presentation that counts!

HALVERSON

"Visi-Rack"

Literature Display
with Plexiglas facing

- Shows full cover of every pamphlet
- Won't warp, crack or discolor
- Clean easily like glass
- Wall or floor models
- Ideal for School rooms, Library, Foyer, Club-Assembly Rooms, etc.

Literature gets more attention . . . better circulation . . . when displayed in this handsome, inviting "Visi-Rack". Six easy sliding adjustable separators in each tier provide individual tilt back pockets. Attractive, grey enamel finish harmonizes with all school room, office or library interiors. Sturdy welded-steel construction assures many years of use.

Model 68 Visi-Rack
(without base) 27 1/2" x 15" x 36" high **\$57.50**

Roomy compartment
base 19" high, has
shelf, lock, 4" ball
bearing casters. **\$30.00**



Prices FOB Chicago
Each section shipped
completely set-up

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THE LOCK WITH THE CLICK THAT COUNTS

NEW GOUGLER KEYLESS LOCK

New Master Key Model

Here is new Gougler lock you should have for your school lockers. New kind of Master key fits slot in bottom.

Model
No. 40



→ Swing right to unlock.
→ Swing left and remove
for normal use

- NEW CONVENIENCE
- NEW SECURITY
- NEW SIMPLICITY

- MOST DURABLE
- FINEST LOCK FOR SCHOOLS

There are no projections or extra bulk to this new lock. It is trim, modern, rugged. Die cast case. Parts impervious to moisture.



Commercial key machines can not duplicate new Master Key.

This is our regular Gougler Red Dot lock. Like all Gougler locks, you can open it without looking, even in the dark. Just count the clicks.

Write for free sample lock No. 40 and factory prices
C. L. GOUGLER KEYLESS LOCK CO.
705-769 Lake St., Dept. 4 Kent, Ohio



Los Angeles Temple

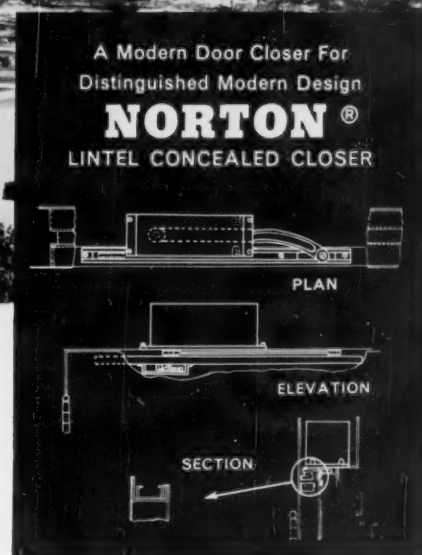
The Church of Jesus Christ of
Latter Day Saints

EDWARD O. ANDERSON • ARCHITECT

NORTON LINTEL CONCEALED DOOR CLOSERS SELECTED FOR NEWEST MORMON TEMPLE

The air of dignity and serene beauty in this inspiring temple is enhanced by a dramatic modern simplicity of design in which even door closers are important. Norton Lintel Concealed Door Closers were chosen for dependability, low maintenance and precision workmanship as well as unobtrusive efficiency. For complete data on the entire Norton line, see the current catalog. Write for your copy today if you don't already have one.

NORTON DOOR CLOSERS, Dept. NS-96, Berrien Springs, Michigan.



What's New ...

Literature and Services

• "Care and Use of 430 MicroRold Stainless Steel" is the title of a 16 page illustrated booklet published by Washington Steel Corp., Washington, Pa. Designed to acquaint stainless steel buyers and users with the advantages of this readily available material, the brochure describes physical properties and analysis, relative corrosion resistance, application and care of MicroRold Type 430 nickel-free stainless steel sheet, and price advantage.

For more details circle #62 on mailing card.

• Detailed data on "Laboratory Burners and Attachments" is presented in Bulletin 20 released by Central Scientific Co., 1700 Irving Park Rd., Chicago 13. Complete with illustrations and prices, the booklet lists almost every gas burner and accessory required in the modern laboratory for use with artificial, mixed, natural or bottled gases.

For more details circle #63 on mailing card.

• "An Extra 40-Pupil Classroom" is the subject of a pamphlet issued by Universal Bleacher Co., Champaign, Ill. The folder shows how gymnasium bleachers can be converted for classroom use by the addition of Universal Portable Tablet Arms.

For more details circle #64 on mailing card.

• Why the Powermaster Electric Folding Partition is the key to safe, effortless space division is told in a new folder issued by Equipment Mfg. Co., Inc., 1400 Spruce St., Kansas City 27, Mo. The folder contains construction design advantages, complete specifications and mechanical details for various types of installations.

For more details circle #65 on mailing card.

• Catalog F-56 on "Efficient Equipment for Mail and Small Materials Handling" is available from The Federal Equipment Co., Carlisle, Pa. Photographs, dimensions and construction information on combination and key type lock boxes, bag racks, screens, grills and sorting cases are included in the catalog which also contains information on the Federal mail room engineering and layout service available to schools, colleges and other institutions.

For more details circle #66 on mailing card.

• "Highlights of Faries Research on Student Lighting" is the title of a four page folder on the story of scientific lighting for all branches of institutions. The folder was planned to answer all lighting questions for buyers of new or replacement lamps. The folder is available from Faries Lamp Division, General Lamps Mfg. Corp., Elwood, Ind.

For more details circle #67 on mailing card.

• A revised catalog of "Driver Training Equipment" is available from the American Automobile Association, 1712 G St. N. W., Washington 6, D.C. Several relatively new devices, including a simple test for measuring finger reaction time, a new test designed to measure muscular coordination and a device for measuring the brake lag of heavy commercial vehicles, are listed in the new catalog.

For more details circle #68 on mailing card.

• The story of Moduwall Live-wall is told in a folder released by Moduwall, Inc., 175 Fifth Ave., New York 10. Entitled "Classroom Walls Come Alive With Moduwall," the folder uses drawings to illustrate the use of this versatile product. Specifications and special features of Moduwall Live-wall are presented in detail in the folder.

For more details circle #69 on mailing card.

• "How to Light a Gymnasium" is the subject of a booklet released by Pittsburgh Reflector Co., 419 Oliver Bldg., Pittsburgh 22, Pa. How uniform, well-distributed gymnasium lighting with a minimum of direct glare can be achieved with fluorescent and incandescent lighting in various degrees of intensity and location is discussed and illustrated by diagrammatic suggestions, charts, photographs and tables.

For more details circle #70 on mailing card.

(Continued on page 224)

Now!
TWO NEW GRADE-AID UNITS TO FILL YOUR NEEDS!

The first practical all-steel clay storage cart, specifically designed for clay and ceramics! The corrosion-proof stainless steel bowl holds up to 150 pounds of clay — heavy-duty casters permit easy handling by teacher and student — non-marking rubber bumpers safeguard walls and furniture! A durable low-cost necessity wherever clay is used!

ALL-STEEL MOBILE CLAY CART!



ART-COUNTER!

• New combination sink, work counter and storage unit that will solve your art-room problems! Stainless-steel (and maintenance-free) work counter and sink . . . four roomy shelves, large enough to hold 24" x 36" art paper . . . closed cabinet for supplies! Economical in price — simple to install in minutes!

WRITE FOR FULL DETAILS!

GRADE-AID DIVISION
COLONIAL ENGINEERING CO., INC.
GROVE STREET, W. SOMERVILLE 44, MASS.

NEUBAUER "TWIN-POST" Gym BASKET RACK

U S Pat. No. 2,621,800



Rigid Corner Posts—Safer Recessed Hasps

The Neubauer "TWIN-POST" corners are actually 2 posts with 3 strong corners (see inset circle). They keep the whole basket rack rigid and in line.

Note below how dividers guide and separate baskets and how hasp and padlock are nearly recessed inside shelf edge. Eliminates danger of cuts and bruises.



FREE ESTIMATES — Neubauer gym Basket Racks are made in capacity desired for any size basket and can be equipped with casters. Olive green or airline grey. Special colors available.

We also make Neubauer "Twin-Post" shelving in range of sizes. Write for literature.

Inquiries invited from school supply dealers.
NEUBAUER MFG. CO.
539 Lowry Ave. N.E.
Minneapolis 28, Minnesota



and wherever food is famous . . . with

Magic Chef

Wherever quality food is served in quantity, fine chefs count on Magic Chef. For performance, economy, and profitable operation from cooking to clean-up, the new Magic Chef Cafe Line is today's most modern equipment for smaller commercial kitchens. *NEW* . . . in features and sturdy construction. *THRIFTY* . . . it saves fuel and cleaning time.

DURABLE . . . its formed steel construction gives maximum strength, longer wear, more dependable performance. *Plus* . . . gleaming stainless steel trim, now at no extra cost.

Call your cooking equipment dealer or write Magic Chef, Inc., Commercial Division, 3201 Harvard Avenue, Cleveland 5, Ohio.

 An advertisement for Magic Chef commercial gas cooking equipment. It features a large stainless steel gas range with six burners and a deep fat fryer. A text box in the center provides details about the fryer.

Save Time, Save Costs with the MAGIC CHEF Deep Fat Fryer

Smooth rounded open-vat tank for easier cleaning. Stainless steel drain racks for "keep-warm" draining. Efficient full 65,000 BTU Burner—faster recovery. Heavy insulation for cooler kitchens. Magic-Lite Automatic Ignition at no extra cost.

For Heavier Cooking Needs Specify Magic Chef Super Duty Commercial Gas Cooking Equipment

What's New ...

• New designs and construction details of aluminum railings are contained in a 44-page catalog issued by Blumcraft of Pittsburgh, 460 Melwood St., Pittsburgh 13, Pa. Information on the new low-cost Tube Line railings for service stairs and other locations where cost is a limiting factor is also included. All Blumcraft aluminum railings are supplied to ornamental metal fabricators who build the railings on the job.

For more details circle #71 on mailing card.

• A dramatic presentation of the new incombustible qualities of Rock Cork insulation is given in a new four-page folder issued by Johns-Manville, 22 E. 40th St., New York 16. Entitled "Now ... J-M Rock Cork Refrigeration Insulation Stops Flame," the leaflet also discusses the sanitary qualities, low conductivity, long service life and other assets of the product.

For more details circle #72 on mailing card.

• A 16-page booklet, "Schools with Flexicore Slabs," shows plans and detail drawings of recent school projects using Flexicore slabs which make firesafe concrete construction possible at low cost. The booklet includes elementary and secondary school designs with drawings showing typical usage and is available from The Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.

For more details circle #73 on mailing card.

• "The Selection of Incinerators for Schools" is the title of a paper prepared by Joseph Goder Incinerators, 4241 N. Honore St., Chicago 13. Written to simplify the selection of incinerators to handle school needs, the paper discusses the problems of air pollution, multiple installations, auxiliary fuel, chimneys and requirements depending upon the number of pupils in the school.

For more details circle #74 on mailing card.

• Designed specifically for college and secondary school foreign language instructors, "Study on Modern Language Laboratories" is a 43-page booklet available from Magnetic Recording Industries, 11 E. 16th St., New York 3. The booklet provides a historical background for the development of the modern language laboratory, an idea of the types of equipment available, the problems to be expected and various methods of solution.

For more details circle #75 on mailing card.

• Classroom equipment for arts, crafts, sciences and homemaking is the subject of Catalog 56-CE offered by Metalab Equipment Co., Div. of Norbute Corp., 214 Duffy Ave., Hicksville, L.I., N.Y. Units described in the two-color, eight-page catalog include all-purpose tables, drawing tables, instructors' desks, student art desks, storage units and portable wardrobes.

For more details circle #76 on mailing card.

• Catalog No. 56 describes the entire line of padlocks manufactured by Master Padlocks Co., Milwaukee 45, Wis. Actual-size illustrations accompany the description of the various styles and sizes of padlocks designed to fill every need.

For more details circle #77 on mailing card.

• "Easy Metal Furniture for Schools and Offices" is discussed in an 8-page catalog received from Hardware Engineering Co., Inc., Garrett, Ind. Descriptive information and illustrations of the line of adjustable stands for typewriters and business machines, as well as general work tables for commercial classrooms and school desk stands are included.

For more details circle #78 on mailing card.

• How to plan shelving installations to fit over 1000 storage needs is simplified by the new shelving catalog released by Hallowell Division, Standard Pressed Steel Co., Jenkintown, Pa. Sample drawings of basic units and accessories with step-by-step explanation, suggested floor plans, a shelf-capacity chart and photographs of complete units show how shelving can be built from the simplest post-and-shelf arrangement to a complicated enclosed unit with sliding or swinging doors.

For more details circle #79 on mailing card.

• The new 1956 Goldblatt catalog of "Tools for the Trowel Trades," is now available from Goldblatt Tool Co., 1910 Walnut St., Kansas City 8, Mo. It should have material of interest to the school maintenance department as well as the shop instructor.

For more details circle #80 on mailing card.

• The application of "Color Corrected Mercury Vapor Lighting for Indoor Sports and Assembly Areas" is discussed in a 16 page booklet with that title. The results of an analysis of such lighting from the standpoint of players, spectators, choice of equipment and selection of lamps, the discussion is supplemented by a case history with illustrations of actual installations. Copies are available from Holophane Company, Inc., 342 Madison Ave., New York 17.

For more details circle #81 on mailing card.

• The story of Shellematic Speed Coolers is told in a four page folder available from the Shelley Mfg. Co., 3233 N. W. 38th St., Miami 42, Fla. How the milk cooler operates by raising bottles and cartons automatically to within easy reach of the smallest school child is discussed with solutions offered to the milk dispensing problem whether the cafeteria is arranged for self-service or if an attendant waits on the students. Full specifications, descriptive details and illustrations of models available are included in the folder.

For more details circle #82 on mailing card.

Film Releases

"How Shall We Live?" filmstrip kit with recordings, pictures and guides to stimulate teen-age thinking. Topics include "Leading and Following," "Feelings About Others," "Choosing," "Giving and Taking Advice" and "The Way We Look At Things," The Jam Handy Organization, 2821 E. Grand Blvd., Detroit 11, Mich.

For more details circle #83 on mailing card.

"The Mikado" and "Great Expectations," 16 mm sound film classics from studios of J. Arthur Rank Productions. International Film Classics Div., United World Films, Inc., 1145 Park Ave., New York 29.

For more details circle #84 on mailing card.

"This Is You—The Human Animal and The Five Senses," tells story of human body, and "Nature of Things—The Elephant and The Camel," animal biographies, both 16 mm, starring Jiminy Cricket. Walt Disney Productions, 16 mm Film Division, 2400 W. Alameda Ave., Burbank, Calif.

For more details circle #85 on mailing card.

Suppliers' News

Burroughs Corporation, Detroit 32, Mich., manufacturer of office machines, computers and microfilm equipment, announces the opening of its Mid-America Exhibit Center at 324 S. Michigan Ave., Chicago 4. The attractive, modern center serves as an exhibit space for Burroughs equipment for modern business and institutional office and research accounting, as well as its other machines, has a fully equipped audio-visual room seating 38 persons, and demonstration and sales rooms.

The Diversey Corp., 1820 Roscoe St., Chicago 13, manufacturer of specialized chemicals for sanitation and maintenance, announces the opening of a New England States office at 101 Tremont St., Boston 8, Mass.

Dunham-Bush, Inc. is the new name of the firm formed by the recent consolidation of the C. A. Dunham Company, formerly of 400 W. Madison St., Chicago 6, manufacturer of heating and ventilating equipment, and the Bush Manufacturing Co., West Hartford 10, Conn. The new address of the consolidated organization will be West Hartford 10, Conn.

Southern Equipment Co., manufacturer of "Custom-built by Southern" food serving equipment, announces removal of all offices and factories to a new modern building at 4550 Gustine Ave., St. Louis 16, Mo.

PROD Ind

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(We pay the postage)

Key

- 1 Milk Dispensers
Norris Dispensers, Inc.
- 2 Concentrated Colorants
Pittsburgh Plate Glass Co.
- 3 General Chair
Hamilton Mfg. Co.
- 4 Dual Control Consoles
Radio Corp. of America
- 5 Typewriter Desk
Desks of America, Inc.
- 6 Two-Pupil Desk
American Seating Co.
- 7 Bus Chassis
White Motor Co.
- 8 Stain-Dust Remover
Huntington Laboratories, Inc.
- 9 Miracle Chalkscope
N.Y. Standard Blackboard Co., Inc.
- 10 Weatherproof Outlet
Pass & Seymour, Inc.
- 11 Vacuum Cleaners
Amer. Floor Surfacing Machine Co.
- 12 Straw Dispenser
Duplex Straw Dispenser Co.
- 13 Rubberlock Mat
R. L. Mitchell Rubber Co.
- 14 Black and White Tile
Hewitt-Robins Inc.
- 15 Steel Folding Doors
Fenestra, Inc.
- 16 Nairon Tile
Gold Seal Div.
- 17 Drinking Fountain
Halsey W. Taylor Co.
- 18 Aluminum Tote Box
Aluminum Cooking Utensil Co.
- 19 Storage Cabinet
Fleetwood Furniture Co.
- 20 Whirlbath
Whirlbath, Inc.
- 21 Phonograph
Callione Corp.
- 22 Oxygen Cleanser
Vacuum Can Co.
- 23 Study Top Desk
Criggs Equipment, Inc.
- 24 Plastic Tumbler
Chicago Molded Products Corp.
- 25 Slide Projector
American Optical Co.
- 26 Anti-Slip Floor Wax
Simoniz Company
- 27 Meat Chopper
Toledo Scale Co.
- 28 Permalok Partitions
Penn Metal Co., Inc.



These cards are detachable and are provided for the convenience of our subscribers, and those to whom they pass their copies, in obtaining information on products and services advertised in this issue or described in the "What's New" Section. See reverse side.

September, 1936

Please ask the manufacturers, indicated by the numbers I have circled, to send further literature and information provided there is no charge or obligation.

WHAT'S NEW

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
50	51	52	53	54	55	56
57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85						

ADVERTISEMENTS

86	87	88	89	90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109	110	111	112	113
114	115	116	117	118	119	120	121	122	123	124	125	126	127
128	129	130	131	132	133	134	135	136	137	138	139	140	141
142	143	144	145	146	147	148	149	150	151	152	153	154	155
156	157	158	159	160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179	180	181	182	183
184	185	186	187	188	189	190	191	192	193	194	195	196	197
198	199	200	201	202	203	204	205	206	207	208	209	210	211
212	213	214	215	216	217	218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236	237	238	239
240	241	242	243	244	245	246	247	248	249	250	251	252	253
254	255	256	257	258	259	260	261	262	263	264	265	266	

NAME

INSTITUTION

ADDRESS

CITY

ZONE

STATE

Index

Key

- 86 Acorn Wire & Iron Works
Folding Gates
- 87 Allied Radio Corporation
Catalog
- 88 American Air Filter Co., Inc.
Unit Ventilators
- 89 American Bitumuls & Asphalt Company
Playground Surfacing Material
- 90 American Crayon Company
Art Materials
- 91 American Desk Mfg. Company
School Furniture
- 92 American Seating Company
School Seating
- 93 Armstrong Cork Company
Acoustical Materials
- 94 Barber-Colman Company
Chalkboard-Wardrobe

WHAT'S NEW

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
50	51	52	53	54	55	56
57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85						

ADVERTISEMENTS

86	87	88	89	90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109	110	111	112	113
114	115	116	117	118	119	120	121	122	123	124	125	126	127
128	129	130	131	132	133	134	135	136	137	138	139	140	141
142	143	144	145	146	147	148	149	150	151	152	153	154	155
156	157	158	159	160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179	180	181	182	183
184	185	186	187	188	189	190	191	192	193	194	195	196	197
198	199	200	201	202	203	204	205	206	207	208	209	210	211
212	213	214	215	216	217	218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236	237	238	239
240	241	242	243	244	245	246	247	248	249	250	251	252	253
254	255	256	257	258	259	260	261	262	263	264	265	266	

NAME

TITLE

INSTITUTION

ADDRESS

CITY

ZONE

STATE

PRODUCT INFORMATION

Index to "What's New"

Pages 175-224

Key

- 1 Milk Dispensers
Norris Dispensers, Inc.
- 2 Concentrated Colorants
Pittsburgh Plate Glass Co.
- 3 General Chair
Hamilton Mfg. Co.
- 4 Dual Control Consoles
Radio Corp. of America
- 5 Typewriter Desk
Desks of America, Inc.
- 6 Two-Pupil Desk
American Seating Co.
- 7 Bus Chassis
White Motor Co.
- 8 Stain-Dust Remover
Huntington Laboratories, Inc.
- 9 Miracle Chalkscope
N.Y. Standard Blackboard Co., Inc.
- 10 Weatherproof Outlet
Pass & Seymour, Inc.
- 11 Vacuum Cleaners
Amer. Floor Surfacing Machine Co.
- 12 Straw Dispenser
Duplex Straw Dispenser Co.
- 13 Rubberlock Mat
R. L. Mitchell Rubber Co.
- 14 Black and White Tile
Hewitt-Robins Inc.
- 15 Steel Folding Doors
Fenster, Inc.
- 16 Nairon Tile
Gold Seal Div.
- 17 Drinking Fountain
Halsey W. Taylor Co.
- 18 Aluminum Tote Box
Aluminum Cooking Utensil Co.
- 19 Storage Cabinet
Fleetwood Furniture Co.
- 20 Whirlbath
Whirlbath, Inc.
- 21 Phonograph
Calhoun Corp.
- 22 Oxygen Cleanser
Vacuum Can Co.
- 23 Study Top Desk
Griggs Equipment, Inc.
- 24 Plastic Tumbler
Chicago Molded Products Corp.
- 25 Slide Projector
American Optical Co.
- 26 Anti-Slip Floor Wax
Simons Company
- 27 Meat Chopper
Toledo Scale Co.
- 28 Permalok Partitions
Penn Metal Co., Inc.

Key

- 29 Skyline Silver
Oneida Ltd.
- 30 Guard Chair Tower
Swingquip, Inc.
- 31 Speed Juicer
Sweden Speed Juicer Corp.
- 32 Typewriter Desk
Smith System Mfg. Co.
- 33 Longer Wheelbases
International Harvester Co.
- 34 Dishwashing Machine
Jackson Products Co.
- 35 Table and Bench Set
Red-Fal Sales Co.
- 36 Fluorescent Lamp
General Electric Co.
- 37 Filmsort Transtrip
Filmsort Division
- 38 Heated Food Cabinet
Crescent Metal Products, Inc.
- 39 Electric Range
Griswold Mfg. Co.
- 40 Automatic Zigzagger
Singer Sewing Machine Co.
- 41 Poly-Wet Detergent
Klensade Products, Inc.
- 42 Drawing Board
Arnot-Jamestown Div.
- 43 Cushion Grip Scissors
John Ahlbin & Sons, Inc.
- 44 Panels and Joists
Stran-Steel Corp.
- 45 Business Stands
Meilink Steel Safe Co.
- 46 Micro-jackets
Atlantic Microfilm Corp.
- 47 Jet Disposer
Food Machinery and Chemical Corp.
- 48 Shower Head
American Radiator and Std. Sanitary Corp.
- 49 Music Flash Cards
Desk-A-Music Co.
- 50 Pitching Machine
Dudley Sports Co.
- 51 Magnascope V200T
Victor Animatograph Corp.
- 52 White Asphalt Tile
Uvalde Rock Asphalt Co.
- 53 Armofam
Armour and Co.
- 54 Percussion Cabinet
Wenger Music Equipment Co.
- 55 Mahogany Gymstands
Wayne Iron Works
- 56 Self-Locking Screw
J. A. Sexauer Mfg. Co.

Key

- 57 Translucent Cloth
Edwin Raphael Co., Inc.
- 58 Book Display
Standard Wood Products Corp.
- 59 Vacuum Cleaner
Clarke Sanding Machine Co.
- 60 Table Tops
Midwest Folding Products
- 61 Wide Projection Screens
Radiant Mfg. Corp.
- 62 "Care of Steel"
Washington Steel Corp.
- 63 "Laboratory Burners"
Central Scientific Co.
- 64 "An Extra Classroom"
Universal Bleacher Co.
- 65 Folder
Equipment Mfg. Co., Inc.
- 66 Catalog F-56
The Federal Equipment Co.
- 67 Folder
Faries Lamp Div.
- 68 Catalog
American Automobile Assn.
- 69 Folder
Moduwall, Inc.
- 70 "How to Light a Gym"
Pittsburgh Reflector Co.
- 71 Catalog
Blumcraft of Pittsburgh
- 72 Folder
Johns-Manville
- 73 Booklet
The Flexicore Co.
- 74 "Incinerators for Schools"
Joseph Goder Incinerators
- 75 "Language Laboratories"
Magnetic Recording Industries
- 76 Catalog 56-CE
Metalab Equipment Co.
- 77 Catalog No. 56
Master Lock Co.
- 78 "Easy Metal Furniture"
Hardware Engineering Co., Inc.
- 79 Shelving Catalog
Standard Pressed Steel Co.
- 80 Trowel Tool Catalog
Goldblatt Tool Co.
- 81 Booklet
Holophane Co., Inc.
- 82 Folder
Shelley Mfg. Co.
- 83 Filmstrip Kit
The Jam Handy Organization
- 84 Films Releases
United World Films, Inc.
- 85 Film Releases
Walt Disney Productions

Index to Products Advertised

Key

- | Key | Page |
|---|-------------------|
| 86 Acorn Wire & Iron Works
Folding Gates | 207 |
| 87 Allied Radio Corporation
Catalog | 219 |
| 88 American Air Filter Co., Inc.
Unit Ventilators | 18, 19 |
| 89 American Bitumuls & Asphalt Company
Playground Surfacing Material | 158 |
| 90 American Crayon Company
Art Materials | 189 |
| 91 American Desk Mfg. Company
School Furniture | 163 |
| 92 American Seating Company
School Seating | 199 |
| 93 Armstrong Cork Company
Acoustical Materials | following page 32 |
| 94 Barber-Colman Company
Chalkboard-Wardrobe | 212 |

Key

- | Key | Page |
|--|---------|
| 95 Bayley Company, William
Curtain-Wall System | 30 |
| 96 Beckley-Cardy Company
Chalkboards | 91 |
| 97 Behrens Mfg. Co., Inc.
Water Caddy | 194 |
| 98 Beltone Hearing Aid Company
Audiometer | 149 |
| 99 Bolia Products Division
Trays | Cover 3 |
| 100 Boonton Molding Company | 157 |
| 101 Bradley Washmountain Company
Wash Fixtures | 198 |
| 102 Breuer Electric Mfg. Company
Floor Maintenance | 27 |
| 103 Brunswick-Balke-Collender Company
Gym Seating | 113 |
| 104 Brunswick-Balke-Collender Company
Classroom Furniture | 183 |

Key

- | Key | Page |
|---|----------|
| 105 Burke Company, J. E.
Playground Equipment | 209 |
| 106 Burroughs Corporation
Accounting Machines | 195 |
| 107 Butler Mfg. Company
Steel Buildings | 208 |
| 108 Calhoun Corporation
Phonographs | 106 |
| 109 Coca Steel Products Corporation
Aluminum Windows | 146, 147 |
| 110 Celotex Corporation
Acoustical Material | 201 |
| 111 Central Scientific Company
Scientific Apparatus | 80 |
| 112 Chevrolet Division
Bus Chassis | 153 |
| 113 Chicago Hardware Foundry Company
Hand Dryer | 102 |
| 114 Churchill Mfg. Company
Floor Maintenance | 191 |

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SEC. 34.9 P. L. & R.
CHICAGO, ILL.

BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in the United States

3 CENT POSTAGE WILL BE PAID BY

THE NATION'S SCHOOLS

919 NORTH MICHIGAN AVENUE

CHICAGO 11, ILLINOIS



FIRST CLASS
PERMIT NO. 136
SEC. 34.9 P. L. & R.
CHICAGO, ILL.

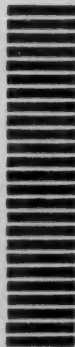
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CHICAGO 11, ILLINOIS



Index to Products Advertised—Continued

Key	Page	Key	Page	Key	Page
115 Cipro Corporation		166 Hunter Douglas Corporation		218 Robbins Flooring Company	
Architectural Hardware	196	Audio—Visual Blinds	205	Maple Flooring	204
116 Clarin Mfg. Company		167 Hunt Pen Company, C. Howard		219 Rockwell Mfg. Company	
School Furniture	34, 35	Pencil Sharpeners	214	Lathes	105
117 Coffey Company, Jack C.		168 Huntington Laboratories, Inc.		220 Rahm & Haas Company	
Filmstrip Library	194	Floor Maintenance	159	School Lighting	24, 25
118 Colonial Engineering Co., Inc.		169 Ideal Dispenser Company		221 Rowles Company, E. W. A.	
Laboratory Furniture	222	Milk Vender	33	Chalkboards	186
119 Colson Corporation		170 Jennison-Wright Corporation		222 Royal McBee Corporation	
Casters	facing page 145	Flooring Material	109	Typewriters	154, 155
120 Columbia-Geneva Steel Division		171 Johns-Manville		223 St. Charles Mfg. Company	
Structural Steel	184, 185	Acoustical Material	26	Booklet	150
121 Conn. Ltd., C. G.		172 Johnson Service Company		224 St. Regis Paper Company	
Catalog	213	Temperature Control	2	Surfacing Material	138, 139
122 Continental Steel Corporation		173 Kewanee Boiler Division		225 Sanymetal Products Co., Inc.	
Wire Fence	facing page 181	Boiler	151	Toilet Compartments	7
123 Cram Company, Inc., George F.		174 Kewanee Industrial Washer Corp.		226 Schleber Sales Company	
Visual Aids	207	Plastic Tableware	160	Folding Table & Bench Unit	11
124 Crane Company		175 Keyes Fibre Company		227 Sexton & Company, John	
Plumbing Fixtures	116, 117	Visual Aid	144	Institutional Food	95
125 Daintee Toys Inc.		176 Keystone View Company		228 Sheldon Equipment Company, E. H.	
Counting Frame	196	Kienzade Products, Inc.		Laboratory Furniture	facing page 113
126 Day-Brite Lighting, Inc.		Dish Machine Equipment	210	229 Sheldon Machine Co., Inc.	
School Lighting	following page 32	177 Kohler Company		Machine Shop Equipment	192
127 Delta Flag Company, Inc.		Electric Plants	176	230 Shwyder Brothers, Inc.	
Flags	203	178 Krueger Metal Products Company		Institutional Seating	143
128 Dictaphone Corporation		School Seating	170	231 Simpson Logging Company	
Dictating Machine	217	180 Libbey-Owens-Ford Glass Company		Acoustical Material	52, 63
129 Ditto, Inc.		Window Glass	89, 189	232 Singer Sewing Machine Company	
Duplicating Machine	129	181 Lippincott Company, J. B.		Sewing & Cutting Table	177
130 Dolge Company, C. B.		Teaching Aid	203	233 Sloan Valve Company	
Athlete's Foot Control	206	182 Logan Engineering Company		Flush Valves	1
131 Dor-Matic Division		Lathes	210	234 Society for Visual Education, Inc.	
Door Controls	197	183 McArthur & Sons, Inc., George		Audio Visual Equipment	following page 18
132 Dudley Lock Corporation		Gym Towels	200	235 Southern Equipment Company	
Locks	140	184 Magic Chef, Inc.		Food Service Equipment	158
133 Du Pont de Nemours & Co., Inc., E. I.		Commercial Cooking Equipment	223	236 Spencer Industries	
Floor Maintenance	17	185 Magnecord, Inc.		Dedication Tablets	216
134 Eastman Kodak Company		Tape Recorder	149	237 Stark Ceramics, Inc.	
Projector	145	186 Majestic Wax Company		Facing Tile	119
135 Edwards Company, Inc.		Floor Maintenance	16	238 Steril-Sil Company	
Fire Alarm System	172, 173	187 Manley, Inc.		Silver Handling System	140
136 Equipment Mfg. Company, Inc.		Popcorn Machine	101	239 Stran-Steel Corporation	
Classroom Wardrobes	202	188 Mayline Company		Structural Systems	174
137 Everett Piano Company		Classroom Furniture	212	240 Straubel Paper Company	
Piano	214	189 Medart Products, Inc., Fred		Towels & Tissue	207
138 Executone, Inc.		Wall Covering	115	120 Tennessee Coal & Iron Division	
Communication Systems	5	190 Midwest Folding Products Sales Corp.		Structural Steel	184, 185
139 Fabri-Form Company		Folding Tables	128	241 Tennant Company, G. H.	
School Tray	186	191 Miller Company		Floor Maintenance	152
140 Federal Telephone and Radio Company		School Lighting	9	242 Toledo Scale Company	
Intercommunication System	facing page 161	192 Minneapolis-Honeywell Regulator Co.		Kitchen Machines	100
141 Fenestra Incorporated		Temperature Control	178, 179	243 Trans Company	
Structural Building Panels	164, 165	246 Mississippi Glass Company		Unit Ventilators	36, 37
142 Fenestra Incorporated		Diffusing Glass	193	120 U. S. Steel Supply Division	
Steel Windows	following page 40	193 Mitchell Mfg. Company		Structural Steel	184, 185
143 Finnell System, Inc.		Folding Tables	136	United States Steel Corporation	
Floor Maintenance	89	194 Monroe Company		Structural Steel	184, 185
144 Ford Motor Company		Folding Tables	208	244 Universal Bleacher Company	
School Bus Chassis	103	195 Montgomery Mfg. Company		Gymnasium Capacity Calculator	89
145 Formica Corporation		Program Clocks	196	245 Universal Industries, Inc.	
Surfacing Material	31	196 Multi-Clean Products, Inc.		Vegetable Peeler	216
146 Gardan City Plating & Mfg. Company		Floor Maintenance	141	246 Universal Mfg. Corp.	
School Lighting	142	197 Naden & Sons		Bleachers	209
147 General Electric Company		Scoreboard	211	247 Uvalde Rock Asphalt Company	
Projection Lamp	108	198 Nanco Corporation		Floor Covering	following page 112
148 General Electric Company		Structural Tile	209	248 Vestal, Inc.	
Surfacing Material	Cover 2	199 National Electrical Manufacturers Assn.		Floor Maintenance	122
149 General Floorcraft, Inc.		Electric Range	13	249 Victor Animatograph Corporation	
Floor Maintenance	137	200 National Lock Company		Projector	181
150 General Mills		Locks	170	250 Vogel-Peterson Company	
Contest	127	201 National Piano Corporation		Coat & Hat Racks	130
151 Gold Seal Division, Congoleum-Nairn, Inc.		Pianos	180	251 Vonnegut Hardware Co., Van Duprin	
Floors and Walls	14	202 Neubauer Mfg. Company		Division	
152 Goodrich Chemical Company, B. F.		Basket Rack	222	Fire & Panic Exit Devices	20, 21
School Chair Cushioning	following page 32	203 Norris Dispensers, Inc.		252 Wakefield Company	
153 Gouglar Keyless Lock Company, C. L.		Milk Dispenser	32	School Lighting	135
Locks	220	204 Norton Door Closer Company		Washington Steel Company	
154 Griggs Equipment, Inc.		Door Closers	221	Stainless Steel	107
School Seating	215	205 Owens Illinois: Kimble Glass Company		253 Weber Costello Company	
155 Gumpert Company, Inc., S.		Glass Block & Roof Panels	167	Art Materials	194
Institutional Food	Cover 4	206 Page Fence Association		256 Weibull Corporation	
156 Hako Building Products		Wire Fence	180	Commercial Cooking Equipment	40
Floor Covering	following page 144	207 Pennsylvania Slate Producers Guild, Inc.		257 West Disinfecting Company	
157 Haldeman-Homme Mfg. Company		Chalkboards	160	Paper Towel Dispenser	126
Folding Table & Bench Unit	15	208 Pentron Corporation		258 Westinghouse Electric Corporation	
158 Halverson Specialty Sales		Tape Recorder	192	Bulletin	28, 29
Display Rack	220	209 Peterson & Co., Inc., Leonard		259 Westinghouse Electric Corporation	
159 Hampden Specialty Products, Inc.		Laboratory Furniture	162	Homemaking Classroom	
Folding Chairs	211	210 Potter Fire Escape Company		Equipment	167
160 Haws Drinking Faucet Company		Fire Escape	200	260 Westinghouse Electric Corporation	
Drinking Fountain	8	211 Powers Regulator Company		Electrical Equipment	131, 132, 133
161 Heins Company, H. J.		Temperature Control	22, 23	261 White Sewing Machine Corporation	
Institutional Food	following page 32	212 Radio Corporation of America		Sewing Machines	123, 124, 125
162 Hillyard Chemical Company		Projector & Sound Systems	110, 111	262 Williams & Brower, Inc.	
Floor Maintenance	following page 128	213 Rauland-Borg Corporation		School Furniture	219
163 Hobart Mfg. Company		Intercommunication System	203	263 World Dryer Corporation	
Kitchen Machines	87	214 Reliance Chemicals Corporation		Hand Dryer	211
164 Holcomb Mfg. Company, J. I.		Plumbing Maintenance	162	264 Wyandotte Chemicals Corporation	
Window Cleaner	facing page 33	215 Remington Rand Inc.		Dishwashing Products	171
165 Hollywood Plastic Arts Inc.		Photocopy Machine	181	265 Yale & Towne Mfg. Company	
Trays	134	216 Republic Steel Corporation		Locks	36, 39
		Steel Building Products	168, 169		
		217 Rixson Company, Oscar C.			
		Door Closers	121		

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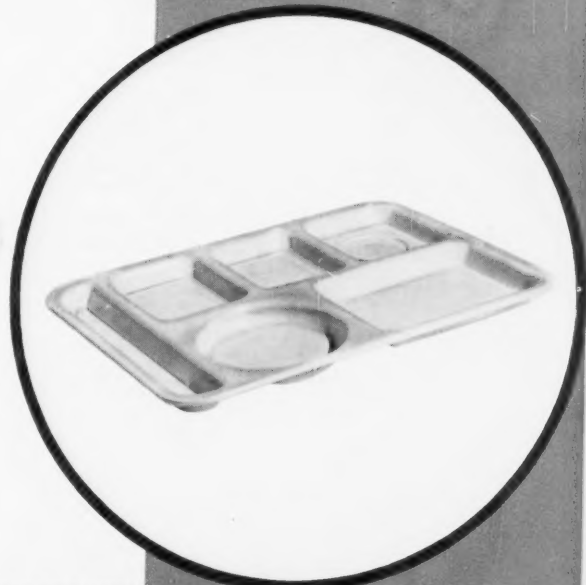
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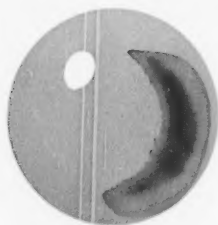
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